



U.S. Department of Energy  
Idaho Operations Office

# ICDF Complex Remedial Action Report

September 2006

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## Idaho Cleanup Project

DOE/ID-11252  
Revision 0  
Project No. 23350

# **ICDF Complex Remedial Action Report**

**September 2006**

**Prepared for the  
U.S. Department of Energy  
DOE Idaho Operations Office**



## **ABSTRACT**

This Idaho CERCLA Disposal Facility (ICDF) Remedial Action Report has been prepared in accordance with the requirements of Section 6.2 of the *INEEL CERCLA Disposal Facility Remedial Action Work Plan*. The agency prefinal inspection of the ICDF Staging, Storage, Sizing, and Treatment Facility (SSSTF) was completed in June of 2005. Accordingly, this report has been developed to describe the construction activities completed at the ICDF along with a description of any modifications to the design originally approved for the facility. In addition, this report provides a summary of the major documents prepared for the design and construction of the ICDF, a discussion of relevant requirements and remedial action objectives, the total costs associated with the development and operation of the facility to date, and identification of necessary changes to the Agency-approved *INEEL CERCLA Disposal Facility Remedial Action Work Plan* and the *ICDF Complex Operations and Maintenance Plan*.



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## ACRONYMS

ALARA	as low as reasonably achievable
ARAR	applicable or relevant and appropriate requirement
CAMU	Corrective Action Management Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFA	Central Facilities Area
CFR	<i>Code of Federal Regulations</i>
COC	contaminant of concern
DEQ	[Idaho] Department of Environmental Quality
DOE	Department of Energy
DOE-ID	Department of Energy Idaho Operations Office
EDF	Engineering Design File
EPA	Environmental Protection Agency
FFA/CO	Federal Facility Agreement and Consent Order
FS	feasibility study
FY	fiscal year
GCL	geosynthetic clay liner
HDPE	high-density polyethylene
ICDF	Idaho CERCLA Disposal Facility
ICP	Idaho Cleanup Project
IDAPA	Idaho Administrative Procedures Act
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
IWTS	Integrated Waste Tracking System
LCRS	leachate collection recovery system
LDRS	leak detection recovery system
LLW	low-level waste



MLLW	mixed low-level waste
O&M	operation and maintenance
OU	operable unit
PCB	polychlorinated biphenyl
PE	professional engineer
PICS	Process Instrumentation and Control System
PPE	personal protective equipment
RA	remedial action
RadCon	Radiological Control
RAO	remedial action objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RD/CWP	Remedial Design/Construction Work Plan
RD/RA	remedial design/remedial action
RI/BRA	remedial investigation/baseline risk assessment
RI/FS	remedial investigation/feasibility study
ROD	Record of Decision
SLDRS	secondary leak detection recovery system
SOW	Statement of Work
SPC	specification
SRPA	Snake River Plain Aquifer
SSA	Staging and Storage Annex
SSSTF	Staging, Storage, Sizing, and Treatment Facility
TAN	Test Area North
TRA	Test Reactor Area (now Reactor Technology Complex [RTC])
TSCA	Toxic Substances Control Act
WAC	Waste Acceptance Criteria
WAG	waste area group

# ICDF Complex Remedial Action Report

## 1. INTRODUCTION

The *INEEL CERCLA Disposal Facility Complex Remedial Action Work Plan* (DOE/ID-10984 [DOE-ID 2003a]) requires that a remedial action report be prepared and submitted to the U.S. Department of Energy Idaho Operations Office (DOE-ID), U.S. Environmental Protection Agency (EPA), and Idaho Department of Environmental Quality (DEQ) (hereinafter referred to as the Agencies) as a primary document. The Staging, Storage, Sizing, and Treatment Facility (SSSTF) prefinal inspection, conducted on June 21 and 22, 2005, serves as the preliminary final inspection. The final inspection will occur when the facility has been capped and closed. The purpose of this report is to document the completeness of construction and any issues that have arisen during the operational shakedown period for the Idaho CERCLA Disposal Facility (ICDF).

The ICDF is unique as a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC § 9601 et seq.) facility in that the primary function is to provide a disposal site in one central location for waste from various cleanup sites at the Idaho National Laboratory (INL) (previously known as the Idaho National Engineering and Environmental Laboratory [INEEL]). This ICDF Complex Remedial Action Report, based upon the *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory* (FFA/CO) (DOE-ID 1991) and the *Remedial Design and Remedial Action Guidance for the Idaho National Engineering Laboratory* (DOE-ID 1994), includes the following:

- A synopsis of the construction work defined in the SSSTF and ICDF Remedial Design/Construction Work Plans (RD/CWPs) (DOE/ID-10889 [DOE-ID 2002a]; DOE/ID-10848 [DOE-ID 2002b]) and certifications that this work was performed
- A summary of minor modifications made to the remedial design during the ICDF Complex construction phase, including the purpose of the performed modifications and results of those modifications
- Discussion of problems encountered during the ICDF Complex construction and resolutions to those problems
- Explanation of modifications to the ICDF Complex Remedial Action Work Plan (RAWP) (DOE/ID-10984 [DOE-ID 2003a]).



## 2. OPERABLE UNIT BACKGROUND

To facilitate cleanup of the Idaho Nuclear Technology and Engineering Center (INTEC) on the INL Site, Waste Area Group (WAG) 3 was divided into Operable Units (OUs) composed of individual contaminant release sites. Several phases of investigation have already been performed for these OUs. For OU 3-13, a comprehensive remedial investigation/baseline risk assessment (RI/BRA) was conducted to determine the nature and extent of the contamination and the corresponding potential risks to human health and the environment under various exposure pathways and scenarios (DOE/ID-10534 [DOE-ID 1997a]). The RI/BRA ultimately identified 101 release sites at INTEC that pose a potential risk or threat to human health and/or the environment.

To expedite the development and analysis of remedial action alternatives for identified release sites, the sites were arranged into seven groups based on contaminants of concern (COCs), accessibility, or geographic proximity. Group 3 within OU 3-13 was designated as “Other Surface Soils.” Subsequently, remedial alternatives for “Other Surface Soils,” as well as for the other OU 3-13 groups, were evaluated in the comprehensive feasibility study (FS) and FS supplemental reports for OU 3-13 (DOE/ID-10572 [DOE-ID 1997b]; DOE/ID-10619 [DOE-ID 1998]).

The *Final Record of Decision, Idaho Nuclear Technology and Engineering Center, Operable Unit 3-13* (DOE/ID-10660 [DOE-ID 1999]) was then developed on the basis of the results of the RI/BRA and the information presented in the comprehensive FS and FS supplemental reports. The OU 3-13 Record of Decision (ROD) (DOE/ID-10660 [DOE-ID 1999]) documents the selected remedies. The selected remedy for Group 3, “Other Surface Soils,” which requires a facility for the treatment and disposal of WAG 3 and other CERCLA waste types generated at the INL Site, is described in detail below. Based on consideration of the requirements of CERCLA (42 USC § 9601 et seq.), detailed analysis of alternatives, and public comments, the Agencies selected “Removal and On-Site Disposal” as the remedy for Group 3. As part of this selected remedy, the ICDF Complex was designed to allow for on-Site disposal of WAG 3 and other CERCLA-generated waste at the INL. The remediation strategy for the on-Site disposal portion of Group 3 is described in three primary documents:

- The *Remedial Design/Construction Work Plan for the Waste Area Group 3 Staging, Storage, Sizing, and Treatment Facility* (hereinafter referred to as the SSSTF RD/CWP) (DOE/ID-10889 [DOE-ID 2002a]), which describes SSSTF design and construction
- The *INEEL CERCLA Disposal Facility Remedial Design/Construction Work Plan* (hereinafter referred to as the ICDF RD/CWP) (DOE/ID-10848 [DOE-ID 2002b]), which describes landfill and evaporation pond design and construction
- The ICDF Complex RAWP (DOE/ID-10984 [DOE-ID 2003a]), which describes operations and management aspects of the ICDF Complex (i.e., the landfill, evaporation pond, and SSSTF).

### 2.1 Facility Description

#### 2.1.1 ICDF Landfill

The ICDF landfill is an on-Site, engineered facility for the disposal of hazardous, low-level waste (LLW), mixed low-level waste (MLLW), and polychlorinated biphenyl (PCB) -contaminated soil and debris waste that (1) is generated by CERCLA remedial and removal actions at the INL Site and (2) meets the criteria listed in the landfill section of the *ICDF Complex Waste Acceptance Criteria* (DOE/ID-10881 [DOE-ID 2005a]). The disposal cells, which include a buffer zone, cover approximately 40 acres, and have a disposal capacity of 389,923 m<sup>3</sup> (510,000 yd<sup>3</sup>). The ICDF landfill meets the substantive requirements of Resource Conservation and Recovery Act (RCRA) Subtitle C (42 USC § 6921 et seq.), Idaho Hazardous Waste Management Act (Idaho Code § 39-4401 et seq.), DOE 435.1, and Toxic

Substances Control Act (TSCA) (15 USC 2601 § et seq.) PCB landfill design and construction requirements. The ICDF landfill utilizes a modular design consisting of two cells. The first, Cell 1, is now complete. Construction of Cell 2 was complete as of October 2005. The ICDF RD/CWP describes the design and construction requirements for the ICDF landfill (DOE/ID-10848 [DOE-ID 2002b]). ICDF landfill leachate is disposed in the ICDF evaporation pond.

### **2.1.2 ICDF Evaporation Pond**

The ICDF evaporation pond, designated as a Corrective Action Management Unit (CAMU) in the OU 3-13 ROD, is designed and constructed to accept not only ICDF landfill leachate, but also aqueous waste streams from ICDF Complex operations and groundwater monitoring. Specifically, this includes aqueous waste (e.g., purge, sampling, well development, and decontamination water) from WAG 3 and ICDF Complex groundwater monitoring that meets the criteria listed in the evaporation pond section of the ICDF Complex Waste Acceptance Criteria (WAC) (DOE/ID-10881 [DOE-ID 2005a]). The ICDF RD/CWP describes the design and construction requirements for the ICDF evaporation pond (DOE/ID-10848 [DOE-ID 2002b]).

### **2.1.3 Staging, Storage, Sizing, and Treatment Facility**

The SSSTF is the receiving facility for CERCLA waste for the ICDF Complex. This facility provides areas for waste storage, ICDF Complex administration, waste receipt and inspection, and waste treatment for INL CERCLA-generated waste that meets the criteria of the SSSTF section of the ICDF Complex WAC (DOE/ID-10881 [DOE-ID 2005a]). The SSSTF RD/CWP describes the design and construction requirements for the SSSTF (DOE/ID-10889 [DOE-ID 2002a]). A map of the ICDF facility layout is included as Figure 2-1.

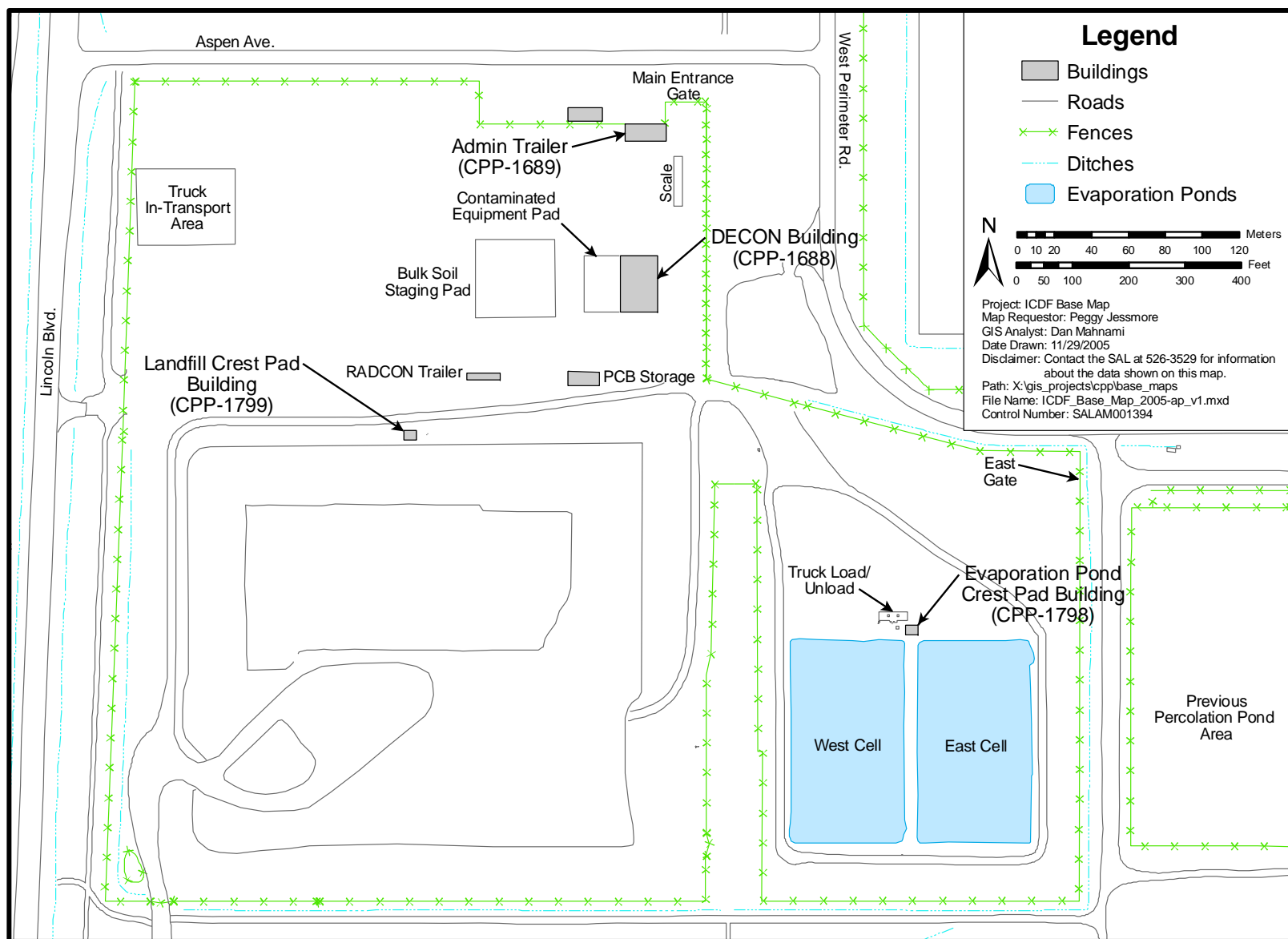


Figure 2-1. Map of Idaho CERCLA Disposal Facility.



### 3. SYNOPSIS OF CONSTRUCTION ACTIVITIES

#### 3.1 ICDF Landfill and Evaporation Ponds

A detailed description of the construction activities that were conducted for the ICDF landfill, evaporation ponds, and associated components including the crest pad buildings and leachate collection system is provided in the ICDF RD/CWP (DOE/ID-10848 [DOE-ID 2002b]).

The specific work elements included in the ICDF RD/CWP include the following:

- Excavation of the Rye Grass Flats Borrow Area and development of the soil bentonite admixture
- Excavation and filling of the ICDF landfill and the evaporation ponds
- Excavation, filling, and grading of the haul roads, access roads, and crest building pads
- Construction of the crest pad buildings
- Construction of the ICDF landfill liner and ICDF evaporation pond liner
- Construction of the leachate system piping, instrumentation, and utilities for the ICDF landfill and ICDF evaporation pond.

A summary of these activities as described in the ICDF RD/CWP is provided below.

##### 3.1.1 ICDF Landfill

The ICDF landfill has been engineered and constructed to meet the substantive RCRA Subtitle C landfill design requirements, which are identified in 40 *Code of Federal Regulations* (CFR) 264.301. The technical design requirements included requirements for the liner system and the leachate collection and removal system (discussed below). The landfill liner has been designed to meet or exceed radioactive, hazardous, and PCB waste landfill liner system criteria and to meet the following additional criteria:

- A top liner designed and constructed of appropriate materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period.
- A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of appropriate materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of appropriate materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 ft (91 cm) of compacted soil material with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  cm/sec.

The leachate collection and recovery system (LCRS) is designed with a double liner leachate collection/detection liner system that is integral to the landfill and evaporation pond liner systems. The LCRS is designed to collect leachate from the landfill and transfer the leachate to the leachate collection sump. From the sump, the leachate is pumped to the landfill crest pad building and then to the evaporation pond. The ICDF LCRS has several unique design characteristics that are not standard in ordinary construction, including double-walled pipe, material compatibility with ICDF landfill waste, and separate high- and low-flow pumping systems.



The leachate collection and removal system between the liners, as well as immediately above the bottom composite liner, is also a leak detection system. This leak detection system is capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system were satisfied by installation of a system that is, at a minimum:

- Constructed with a bottom slope of 1% or more.
- Constructed of granular drainage materials with a hydraulic conductivity of  $1 \times 10^{-2}$  cm/sec or more and a thickness of 12 in. (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of  $3 \times 10^{-5}$  m<sup>2</sup>/sec or more.
- Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying waste, waste cover materials, and equipment used at the landfill.
- Designed and operated to minimize clogging during the active life and post-closure care period.
- Constructed with sumps and liquid removal pumps of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. The design of each sump and removal system provides a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

The construction activities for the ICDF landfill included the following:

- Excavation/fill of the cell
- Subgrade preparation
- Placement of required leachate piping
- Load/haul/placement of the compacted clay liner
- Construction of the ICDF landfill liner
- Acceptance of the ICDF landfill liner
- Construction of the crest pad and crest pad buildings
- Load/haul/compaction of haul roads into the ICDF landfill
- Load/haul/placement/compaction of the ICDF landfill drain gravel and operations layer
- Tie-in of cell expansion liner systems, LCRS, and secondary leak detection recovery system (SLDRS) to existing systems.

**3.1.1.1 ICDF Landfill Liner.** The ICDF landfill liner is a composite system consisting of both a primary and secondary geomembrane that will prevent migration of hazardous waste outside of the liner system. Installation of the liner for the cell was in strict accordance with INL specifications, namely Specification (SPC) -1476, "ICDF Landfill and Evaporation Pond Remedial Design/Construction Work

Plan – Approved for Construction”; SPC-591, “ICDF Landfill Cell 2 Construction Specifications – Approved for Construction”; and the INEEL CERCLA Disposal Facility Construction Quality Assurance Plan (DOE/ID-10851 [DOE-ID 2002c]). The construction activities for the ICDF landfill liner construction included the following:

- Construction of the SLDRS
- Load/haul/placement/compaction of the soil-bentonite liner (SBL) on prepared subgrade
- Placement of the secondary geomembrane
- Placement of the leak detection recovery system (LDRS) gravel, piping, and instrumentation
- Placement of the geocomposite LDRS
- Placement of the geosynthetic clay liner (GCL)
- Placement of the primary geomembrane
- Construction of the LCRS
- Placement of the geotextile cushion
- Load/haul/placement/compaction of the drain gravel and operations layer.

### **3.1.2 Evaporation Pond**

The ICDF evaporation pond system consists of two 2,200,000-gal capacity cells to contain the aqueous waste. The pump system tracks the volume of waste disposed to the pond. The evaporation pond has been designated and constructed as a CAMU in accordance with the substantive requirements of Idaho Administrative Procedures Act (IDAPA) 58.01.05.08 (40 CFR 264.552 and 40 CFR 264 Subpart K and CC).

Construction of the ICDF evaporation pond was similar to the construction of the ICDF landfill and required a coordinated effort. The construction activities for the ICDF evaporation pond included the following:

- Excavation of the ICDF evaporation pond
- Subgrade preparation
- Load/haul/placement of the structural fill
- Construction of the ICDF evaporation pond liner
- Acceptance of the ICDF evaporation pond liner
- Construction of the crest pad building
- Installation and testing of the leak detection piping and instrumentation.

**3.1.2.1 ICDF Evaporation Pond Liner Construction.** The ICDF evaporation pond was designed to contain landfill leachate and other aqueous waste. The ICDF evaporation pond liner serves to prevent migration of hazardous constituents and allow leak detection. The design of the ICDF evaporation pond lining system includes an operations layer and a composite liner system, consisting of three geomembranes (sacrificial, primary, and secondary) and two GCLs (primary and secondary).

The construction activities for the ICDF evaporation pond liner construction included the following:

- Load/haul/placement/compaction of structural fill, comprised of material from Rye Grass Flats, on prepared subgrade
- Placement of secondary GCL
- Placement of secondary geomembrane
- Placement of geotextile cushion
- Placement of LDRS gravel, piping, and instrumentation
- Placement of geocomposite LDRS
- Construction of operations layer—0.9 m (3 ft)
- Placement of primary GCL
- Placement of primary geomembrane
- Placement of sacrificial geomembrane.

The upper high-density polyethylene (HDPE) geomembrane is a sacrificial liner that provides protection from ultraviolet light and a measure of puncture protection to the upper, primary geomembrane. A GCL is provided as equivalent protection to one layer, 3 ft of  $1 \times 10^{-7}$  cm/sec clay (beneath the secondary geomembrane), to allow the pond to function through extreme temperatures experienced at the INL Site (EDF-ER-312). The evaporation ponds are designed for operating periods of 15 years for the active life of the landfill, and 30 years for the post-closure period.

### **3.1.3 Crest Pad Buildings**

The landfill and evaporation pond crest pad buildings are designed to provide an enclosed area for sampling and maintaining the leachate pumps and associated leak detection system pumps, monitors, and alarms. The buildings are insulated, engineered metal building systems classified as Type II-N construction in accordance with the Uniform Building Code. They have metal wall panels and a standing-seam metal roof. The buildings are designed for dead, live, snow, and wind loads in accordance with the technical and functional requirements. The crest pad buildings also are designed with reinforced, cast-in-place concrete foundations that meet the technical and functional requirements. These foundations consist of spread footings, column piers, grade beams, and a slab-on-grade floor. The crest pad buildings were built with radiant-type unit heaters for freeze protection and personnel comfort during leachate sampling operations.

### **3.1.4 ICDF Complex Fire Protection, Power, and Lighting**

**3.1.4.1 Fire Protection.** Fire hydrants have been placed at the ICDF landfill and evaporation pond for easy access and adequate fire hose lay down. Fire extinguishers are provided in each crest pad

building. The ICDF landfill and evaporation pond crest pad buildings are equipped with fire alarm and evacuation systems.

**3.1.4.2 Electrical Power.** The utilities for the ICDF landfill and evaporation pond area are supplied by tie-in to the SSSTF utilities. Power for the ICDF landfill and evaporation pond crest pad buildings is supplied from the SSSTF substations via an underground duct bank. Any metal underground piping, the rebar in the foundation, and the metal frames of the crest pad buildings are tied to the ground system.

**3.1.4.3 Area Lighting.** Lighting meets the recommendations of the current Illumination Engineering Society. Nonglare fluorescent fixtures supply light in each of the crest pad buildings.

### **3.1.5 Process Instrumentation and Control System**

The ICDF Process Instrumentation and Control System (PICS) incorporates hardware and software, enabling operators to monitor and interface with process control systems both locally and remotely.

### **3.1.6 Staging, Storage, Sizing, and Treatment Facility**

A detailed description of the construction activities that were conducted for the ICDF SSSTF is provided in the SSSTF RD/CWP (DOE/ID-10899 [DOE-ID 2002a]).

The SSSTF was designed as a Radiological, Low-Hazard facility. Additionally, based on information from the safety classification of structures, systems, and components, determined in accordance with DOE 5480.30, "Nuclear Reactor Safety Design Criteria"; DOE 5480.23, "Nuclear Safety Analysis Reports"; and DOE-STD-3009-94, "Preparation Guide for U.S. Department of Energy Non-Reactor Nuclear Facility Documented Safety Analyses," the SSSTF has no safety class or safety-significant systems.

**3.1.6.1 Roadways and Parking Areas.** Roadways are designed to alleviate heavy traffic on existing thoroughfares and to provide circulation efficiency within the facility. The roadways include a new link (Aspen Avenue) from Lincoln Blvd to the perimeter road around INTEC, as well as new interior circulation roads within the ICDF Complex linking the SSSTF, the ICDF landfill, and the ICDF evaporation pond. Aspen Avenue eliminates excessive truck traffic related to the SSSTF as well as separate, heavy vehicle traffic from the personnel transport vehicles on the main access road to INTEC.

All SSSTF roadways were designed and constructed in accordance with applicable *DOE-ID Architectural Engineering Standards* (DOE-ID 2002d) and the State of Idaho Transportation Department, Division of Highways, Standard Specification for Highway Construction. Road and site pavement design is documented in Engineering Design File (EDF) -1913, "SSSTF Access Road and Site Pavement Ballast Requirements." The SSSTF provides vehicle parking as required to support facility operations.

**3.1.6.2 Radiological and Dust Control.** The design includes establishment of acceptable limits for contamination, provisions for physical and administrative safeguards, and controls to limit and/or confine exposure to contaminants. Radiation is controlled at the source. Radiological control instrumentation verifies that this is being accomplished.

**3.1.6.3 Fences.** A 6-ft-high, chain-link fence has been constructed around the perimeter of the ICDF Complex. The fence is posted with appropriate warning signs.

**3.1.6.4 Administrative Facilities.** The administrative facilities consist of two transportable office trailers and a truck scale for weighing waste transport vehicles entering and leaving the ICDF Complex. The office trailers include office space, a public use area with kitchenette, document storage room, restrooms, and utility rooms. The trailers are 28 × 70 ft and 24 × 60 ft in size.

The truck scale is located immediately south of the administration building. The scale has a 60-ton capacity and accuracy within 0.1% at full scale.

**3.1.6.5 Decontamination Facilities.** The decontamination facilities consist of the decontamination (“decon”) building, contaminated equipment storage pad, associated piping and leak detection system, oil/water separator, and the lift station. The specific work elements for constructing these facilities are discussed in the remainder of this section.

**3.1.6.5.1 Decontamination and Treatment Building—**The decontamination building is divided into three main sections:

- One-half of the building consists of a decontamination bay. This area is approximately 3,100 ft<sup>2</sup> (30.25 × 102.5 ft). The floor is a post-tensioned concrete slab with high-strength cables to attenuate shrinkage and cracking. The slab is coated with a waterproof seal and is sloped to drain into a collection trench in the middle of the bay. The trench collects and transports all runoff water to the lift station, and then to the evaporation pond.
- Approximately one-fourth of the building has been designated as a treatment area. The slab under this area is post-tensioned and sloped to drain into a 2 × 3-ft sump, to the lift station, and then to the evaporation pond. The floor in this area is coated with a waterproof seal.
- The remaining area consists of a mechanical room, fire riser room, electrical room, personal protective equipment (PPE) change room, a Radiological Control (RadCon) equipment room, and men’s and women’s change rooms with showers. The ceiling of the fire riser and electrical rooms consists of a precast, voided slab designed to support the heating, ventilating, and air conditioning equipment for the building. The voids in the slab are intended to reduce the slab’s dead load.

**3.1.6.5.2 Minimum Treatment System—**At the time of submittal of this report (September 2005), the only treatment process approved in the SSSTF is microencapsulation of non-radioactive soils. The treatment system in use consists of a soil mixing unit and associated reagent feed systems. This treatment process has undergone a prefinal inspection by Agency personnel. Prior to implementing additional treatment processes (including microencapsulation of radioactive contaminated soils/debris), an additional prefinal inspection will be performed to ensure that the process is conducted in a safe and compliant manner, consistent with the Agency-approved documentation. The base treatment system for soils is a premanufactured system. System equipment was designed, assembled, and installed in accordance with SPC-1485, “A-E Construction Specifications – Staging, Storage, Sizing, and Treatment Facility,” as well as the supplier’s standard practices when such practices did not conflict with the specification.

**3.1.6.5.3 Secondary Containment and Leak Detection—**The leak detection system under the decontamination and treatment pad in the decontamination building was constructed by first preparing the subgrade to provide a good foundation with no sharp or protruding rocks evident. Then, an 8-oz nonwoven geotextile was installed to protect the liner from the sub-base material. Following the geotextile installation, a 40-mil HDPE liner was installed. A geonet was placed on the liner as the drainage layer. The geonet is lined on both sides with a filter fabric. A 6-in. layer of sand was then placed on the filter fabric upon which the concrete slabs rest.

All piping in place from the decontamination building and contaminated equipment storage pad to the lift station is double-lined. Sensors are placed in the lift station to monitor any leakage that may occur.

**3.1.6.5.4 P-Trap**—A concrete P-trap was constructed under the treatment area floor. The intent of the P-trap is intended to provide a water block separating the outside air from the air inside the decontamination building to maintain negative pressure in the building to control contaminated dust.

**3.1.6.5.5 Contaminated Equipment Storage Pad**—The contaminated equipment storage pad is a 7,400-ft<sup>2</sup> concrete pad (72.66 × 102.5 ft) adjacent to the decontamination building. The pad is a 6-in.-thick, post-tensioned concrete slab, with high-strength cables to attenuate shrinkage and cracking. The slab is coated with a waterproof seal. Curbs are placed around the pad and it is sloped to drain into an 80-ft-long trench drain that collects and transports all runoff water to the lift station.

**3.1.6.5.6 Routing of Contaminated Water**—To comply with the applicable or relevant and appropriate requirements (ARARs), all drain piping from both the decontamination building and contaminated equipment storage pad is double-contained. Drain water and storm water on the contaminated equipment pad are collected in a trench drain. This trench drain directs the water to a 12-in. HDPE drain pipe encased in an 18-in. HDPE pipe. The drainage is directed into the decontamination building, under the floor, and through the P-trap under two floor drains to collect drainage from the decontamination and treatment rooms of the decontamination building. At this point, the 12-in. pipe is reduced to a 6-in. HDPE pipe, which is encased in a 10-in. HDPE pipe. The drain water flows through the 6-in. pipe to the oil/water separator and then into a lift station. The drain water is then pumped through a 2-in. pressure pipe from the lift station to the evaporation pond for disposal. The 2-in. pipe is encased in a 4-in. HDPE pipe.

**3.1.6.5.7 Oil/Water Separator**—All drain water from the contaminated equipment storage pad and the decontamination building drains through an oil/water separator. The oil/water separator is a concrete vault with a baffle that allows the collection of petroleum products. Soil particles also may be allowed to settle out in the separator.

**3.1.6.5.8 Lift Station**—The lift station was designed to pump water from the decontamination building and contaminated equipment storage pad to the evaporation pond. The lift station consists of an inner 4-ft-diameter HDPE shell placed inside a 6-ft-diameter concrete vault to be used as the secondary containment system. Two 2-hp submersible grinder pumps are placed inside the lift station. The pumps are configured to operate alternately to provide redundancy and extend the life of both pumps. Slide rails are placed inside the inner shell so that pumps can be removed from the outside surface and maintenance personnel are not required to enter the lift station housing. A leak detection monitor is located inside the secondary containment vault to detect leaks in the system.



## **4. MINOR MODIFICATIONS MADE TO THE ICDF LANDFILL, POND, AND SSSTF DURING THE CONSTRUCTION PHASE**

During the construction phase of the ICDF landfill, pond, and SSSTF, numerous modifications were made to the original design presented in the RD/CWP documents for these projects. Logs were maintained that provide a description of each modification, as well as the rationale and/or justification for each change. Other detailed files also are maintained, which contain all of the relevant information associated with the modifications. These files are maintained at the ICDF as controlled documents. A change notice summary representing changes specifically related to the SSSTF is provided in Appendix A of this report. Should additional detail be required, other files can be readily provided for review. ICDF Landfill and Pond Construction Summary Modifications were previously submitted to the Agencies (during the prefinal inspection) for these units.

Modifications were necessary for a variety of reasons. Some modifications were necessary to address problems that arose (see Section 4.1 below for additional detail), and others were implemented as process improvements as construction activities progressed. Individual line-items on the change logs (see Appendix A) provide a detailed explanation for each modification.

### **4.1 Problems Identified During Construction**

Any problems encountered during construction of the ICDF facility that resulted in a change to the design provided in the RD/CWP documents are identified on the change logs discussed in Section 4 above and are further documented in nonconformance reports developed for the entire ICDF Project (see Appendix B [provided on CD-ROM]). (As noted above, not all changes were the result of problems associated with construction; many modifications resulted from design changes and process improvements.) The majority of the problems encountered centered on the construction of the SSSTF, where occasional conflicts between the actual construction conditions and the design specifications resulted in equipment and utilities not fitting as designed. These issues were resolved during the course of the project through change notices. Other problems encountered included unanticipated field conditions, changes in electrical and other equipment specifications, plumbing and utility issues, and damaged or inoperable equipment.





## 5. CHRONOLOGY OF EVENTS

A chronology of events related to the OU 3-13 Remedial Action is demonstrated by the enforceable milestones and associated completion dates listed in Table 5-1.

Table 5-1. Enforceable and key milestones for Operable Unit 3-13, with enforceable and completion dates.

Enforceable and Key Milestones for OU 3-13	Date	
	Enforceable	Completed
OU 3-13 Draft Comprehensive RI/FS SOW submitted for review	8/31/95	7/1/94
OU 3-13 Draft Comprehensive RI/FS Work Plan submitted for review	1/31/96	3/17/95
OU 3-13 Draft Comprehensive RI/FS submitted for review	9/30/97	7/25/97
OU 3-13 Draft Comprehensive ROD submitted for review	3/31/99	3/29/99
OU 3-13 Draft Institutional Controls Plan submitted for review	12/23/99	12/22/99
OU 3-13 Group 3 SSSTF Draft RD/RA Work Plan submitted for review	11/28/01	8/23/01
OU 3-13 Group 3 WAG 3 Soils Draft Prioritization and Site Grouping Report submitted for review	5/26/02	5/24/02
OU 3-13 Group 3 Draft ICDF Complex RA Work Plan submitted for review	12/9/02	8/19/02
ICDF Landfill became operational	N/A	9/13/03
Evaporation Pond became operational	N/A	10/21/03
SSSTF became operational	N/A	7/14/05

CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act

ICDF = Idaho CERCLA Disposal Facility

OU = operable unit

N/A = not applicable

RA = remedial action

RD = remedial design

RI/FS = Remedial Investigation/Feasibility Study

ROD = Record of Decision

SOW = Statement of Work

SSSTF = Staging, Storage, Sizing, and Treatment Facility

WAG = waste area group



## **6. INSPECTIONS**

The final inspection will be conducted when the evaporation pond has been closed and the landfill capped and closed, which is currently scheduled for 2018. This section includes information related to prefinal inspection activities conducted thus far. Additional information can be found (on CD-ROM) in Appendix C, which includes a Corrective Action Plan from the Landfill Cell 1 and evaporation pond prefinal inspection, documentation regarding deficiencies and recommendations, and a copy of the prefinal inspection checklist used for Landfill Cell 1 and evaporation ponds. A copy of the checklist used for the SSSTF prefinal inspection also is included. Neither agency completed the checklist at the time of the inspection, since no deficiencies were noted. Additionally, this section includes certification letters (shown in Figures 6-1 and 6-2) from the professional engineers (PEs) certifying the ICDF tank systems at SSSTF and the landfill and evaporation pond liner systems, respectively. More information regarding these certifications can be found in Appendix D (provided on CD-ROM).

### **6.1 Outstanding Issues**

#### **6.1.1 SSSTF Equipment Pad Drain Trench**

The SSSTF drain trench is constructed along the west end of the equipment pad. It collects runoff from the pad and the west half of the decontamination building roof and any spills from the pad. The trench drain was designed so that the invert would be flush with the low point of the trench. Any accumulated liquids drain to the low point and are channeled via a 12-in. drain pipe to the concrete P-trap under the decontamination building floor. From there, liquid drains through the oil/water separator to the lift station where it is pumped to the evaporation pond.

During construction, the invert of the drain pipe was installed approximately 2 in. above the floor of the trench. Therefore, liquids will not completely drain out of the trench as intended. The proposed corrective action is to raise the floor of the trench to the level of the drain invert using reinforced concrete or grout. The floor will be sloped so that all liquids will drain as designed. This correction is expected to be completed before April 30, 2006. Meanwhile, administrative controls are in place to prevent storage of contaminated materials on the pad.

#### **6.1.2 SSSTF Concrete P-Trap**

The concrete P-trap is part of the equipment pad drain system and is located under the floor of the decontamination building. The P-trap provides a vapor barrier so that, during operation of the treatment process, when the building is under negative pressure, air is not drawn into the treatment room from the outside. The invert of the inlet to the P-trap is approximately 4 in. higher than the invert of the outlet. During normal operations, the water level in the P-trap has never risen above the inlet invert. The P-trap was leak-tested to that level and found to be leak-tight. The drain pipe primary containment also was leak tested and found to be leak tight. However, during an abnormal influx of water, the level rose above the invert and a leak into the secondary containment around the P-trap was discovered. The most likely source of the leak is the seal between the concrete wall of the P-trap and the drain pipe secondary containment. Corrective actions are currently being evaluated. The selected alternative will be implemented before April 30, 2006.

### **6.1.3 Flow Meter Calibration**

Due to design deficiencies and radiological concerns, two flow meters, FI/FT- CD-330 and FI/FT-CD-207, and their associated flow totalizers, are not currently covered by the calibration program. To calibrate the flow meters, while ensuring ALARA (as low as reasonably achievable [requirement]) compliance, the piping system in the evaporation pond crest pad building (CPP-1798) requires modification. The redesign is currently under consideration. Completion of the corrective action and calibration of the flow meters is scheduled for completion prior to January 31, 2006.

## **6.2 Milestones**

There is only one milestone currently in place until closure activities begin. The milestone is to have the mercury soil pile treated by March 2006.

## 1.0 CERTIFICATION

### **Tanks Systems Being Certified**

The tank systems being addressed by this attestation are the sumps and leak detection manholes located within the Idaho National Engineering and Environmental (INEEL) CERCLA Disposal Facility (or ICDF) located adjacent to the INEEL's Idaho Nuclear Technology and Engineering Center (INTEC). These tank systems are further described in Section 3.1 of this assessment.

### **Attestation**

The tank systems have sufficient structural integrity and are acceptable for the storing of the wastes identified in this assessment. This attestation is contingent upon certain conditions, which are also identified in this assessment.

### **Certification**

Relying in part upon documentation and statements of fact provided by INEEL personnel, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Keith D. Davis, P.E.  
Idaho P.E. Registration #6831  
Jason Associates Corporation  
545 Shoup Avenue, Suite 335B  
Idaho Falls, Idaho 83405

Date:

Figure 6-1. Professional engineer's letter certifying the ICDF tank systems.

## SIGNATURE PAGE

Vector Engineering, Inc. (Vector) provided construction quality assurance services during the construction of Cell 1 and the Evaporation Ponds at the ICDF INEEL Facility. The following final construction certification report was prepared by Vector and is hereby submitted.

This report was prepared in accordance with generally accepted geotechnical and geosynthetic engineering practices applicable at the time the report was prepared. Vector makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement, and as described in this report. Our recommendations consist of professional opinions and conclusions based on our testing and inspection program performed during construction.

The purpose of this report is to inform the Department of Energy, Idaho Department of Environmental Quality, and the EPA that, in our professional opinion, the Cell 1 and evaporation pond liner system at the ICDF INEEL Facility has been constructed and completed in general accordance with the project plans and specifications. During the construction, Vector conducted observations and testing to determine that the construction was conducted in general accordance with the project plans and specifications. The conclusions of our observations and testing, together with a written narrative describing the personnel, scope, methods, procedures and results of our CQA services, have been included in this certification report.

  
Bryan E. Fritzler P.E., No 10233  
Certifying Engineer




Figure 6-2. Professional engineer's letter certifying the landfill and evaporation pond liner systems.

## **7. REMEDIAL ACTION OBJECTIVES AND APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**

This section presents the remedial action objectives (RAOs) and applicable or relevant and appropriate requirements (ARARs) that have been implemented to protect human health and the environment for CERCLA disposal actions at INL.

### **7.1 Idaho CERCLA Disposal Facility Goals and Requirements**

The remediation goal for the ICDF is to consolidate contaminated soils at a single location to prevent exposure of human and ecological receptors. This remediation goal will be accomplished by siting, designing, operating, and closing the ICDF to prevent exposures or leachate releases to the underlying Snake River Plain Aquifer (SRPA) groundwater. The siting, design, operation, closure, and post-closure requirements necessary to accomplish these remediation goals are delineated in the following subsections.

#### **7.1.1 Siting Requirements**

The ICDF meets or exceeds RCRA Subtitle C location standards specified in IDAPA 16.01.05.008 (40 CFR 264.18).

#### **7.1.2 Design Requirements**

The ICDF was designed to:

1. Meet or exceed RCRA Subtitle C design standards specified in IDAPA 16.01.05.008 (40 CFR 264.301 and 40 CFR 264.302) and the PCB chemical waste landfill design requirements specified in 40 CFR 761.75
2. Minimize precipitation run-on and maximize precipitation run-off to effectively reduce infiltration through the contaminated soils and debris
3. Minimize subsidence of the waste and the landfill cap
4. Ensure protection of human and ecological receptors
5. Ensure protection of the SRPA.

#### **7.1.3 Operational Requirements**

The ICDF operation:

1. Limits disposed waste types to those generated by the INL CERCLA program.
2. Limits disposed waste types to those with contaminant concentrations that will not result in maximum contaminant levels being exceeded in the SRPA.
3. Limits disposed waste types to low-level radioactive waste, PCB solids, hazardous, and mixed low-level radioactive waste.



4. Treats waste (soils, debris, and treatment residues) originating from outside the WAG 3 area of contamination to comply with the land disposal requirements specified in IDAPA 16.01.05.011 (40 CFR 268 and 40 CFR 268.49) as applicable.
5. Minimizes leachate generation. Leachate will be collected and treated using physical/chemical treatment (i.e., evaporation in a surface impoundment designed in accordance with the substantive requirements of the hazardous waste surface impoundments (IDAPA 16.01.05.008 [40 CFR 264.221])). Residues from the evaporation process will be managed in the ICDF as necessary during the active life and post-closure period of the ICDF cells.

#### **7.1.4 Closure and Post-Closure Requirements**

The ICDF closure and post-closure will:

1. Meet or exceed RCRA Subtitle C closure and post-closure care requirements specified in IDAPA 16.01.05.008 (40 CFR 264.310).
2. Ensure that the final cover is designed to serve as an intrusion barrier for a period of at least 1,000 years.
3. Minimize subsidence of the landfill and its final cover.
4. Place easily located permanent markers at all corner boundaries (for each cell of the landfill) that identify the potential exposure hazards.
5. Place permanent land-use restrictions, zoning restrictions, and deed restrictions on the ICDF and its adjacent buffer zone to permanently preclude industrial or residential development until unacceptable risk no longer exists at the site.
6. Include the disposal records and the surveyed permanent marker locations in the land-use restriction documents. These remediation goals support groundwater RAOs 1a through 1e, surface soil RAOs 2a(1)(s) and 2a(2)(c), and SRPA RAO 4b, as specified in the OU 3-13 ROD (DOE/ID-10660 [DOE-ID 1999]).

#### **7.1.5 Operable Unit 3-13 Record of Decision ARARs**

As defined in the OU 3-13 ROD (DOE/ID-10660 [DOE-ID 1999]), applicable ARARs are as follows:

- IDAPA 16.01.05.008 (40 CFR 264.114), “Disposal and Decontamination of Equipment, Structures, and Soils”
- IDAPA 16.01.05.008 (40 CFR 264, Subpart I), “Use and Management of Containers”
- IDAPA 16.01.05.008 (40 CFR 264, Subpart DD), “Containment Buildings”
- IDAPA 16.01.05.008 (40 CFR 264.1052–1062 [Subpart BB]), “Air Emissions for Equipment Leaks”
- IDAPA 16.01.05.008 (40 CFR 264.1082–1088 [Subpart CC]), “Air Emissions Standards for Tanks, Surface Impoundments, and Containers”

- IDAPA 16.01.05.008 (40 CFR 264, Subpart F), “Releases from Solid Waste Management Units”
- IDAPA 16.01.05.008 (40 CFR 268), “Land Disposal Restrictions”
- IDAPA 16.01.05.005 (40 CFR 261), “Identification and Listing of Waste”
- IDAPA 16.01.05.006 (40 CFR 262.11), “Hazardous Waste Determination.”



## 8. REMEDIAL ACTION WORK PLAN CHANGES

The following changes will be incorporated into the *INEEL CERCLA Disposal Facility Complex Remedial Action Work Plan* (RAWP) (DOE/ID-10984 [DOE-ID 2003a]) to reflect current documentation.

1. Page 1-10; Remedial Action Work Plan appendixes, Appendix B: ICDF Complex Material Profile Guidance (DOE/ID-11046) and Appendix D: ICDF Complex Waste Verification Sampling and Analysis Plan (DOE/ID-10985) have been combined and replaced by the *ICDF Complex Waste Profile and Verification Sample Guidance* (DOE/NE-ID-11175 [DOE-ID 2005b]). This document will become Appendix B of the RAWP.
2. All references throughout the RAWP made to the previously mentioned combined/replaced documents will be replaced with the correct reference to the *ICDF Complex Waste Profile and Verification Sample Guidance* (DOE/NE-ID-11175 [DOE-ID 2005b]).
3. Page 3-1, eighth bullet under 3.1.1, change the “of” to “or.”
4. Page(s) 3-1 and 3-2 discuss the Waste Acceptance Criteria as three separate documents. Update these sections to reflect the new combined Complex WAC (DOE-ID-10881 [DOE-ID 2005a]).
5. Page 4-7, Section 4.2.3 should be rewritten to reflect the changes to the Waste Profile and Verification Sample Guidance document.
6. Page 4-14, Section 4.6 “Evaporation Pond”; suggest rewording the sentence “It will also receive other WAG 3 aqueous waste (e.g., purge, sampling, and well development water) that meet the ICDF evaporation pond WAC” to read “...other INL aqueous waste that meets the ICDF WAC.”



## **9. WASTE ACCEPTANCE CRITERIA CHANGES**

Several changes were made to the various WAC documents (landfill, pond, and SSSTF) to add new constituents as requested by waste generators. Other significant changes included revising the PCB criteria to be consistent with current regulatory language and allowing higher concentrations of PCBs fixed in paint, etc., to be disposed, while maintaining the soil criteria at 500 ppm. Combining the three WAC documents into one comprehensive document improved the usability and efficiency of the criteria.



## **10. OPERATIONS AND MAINTENANCE PLAN CHANGES**

Proposed changes to the *ICDF Complex Operations and Maintenance Plan* (DOE/ID-11000 [DOE-ID 2003b]) are included in Appendix E.





## 11. CERTIFICATIONS

This report certifies that the disposal facility construction portion of the remedy for Group 3, Other Surface Soils, selected in the OU 3-13 ROD (DOE/ID-10660 [DOE-ID 1999]), has been completed and the remedy is operational and functional. Construction of the facility was performed and completed in accordance with the ICDF RD/CWP (DOE/ID-10848 [DOE-ID 2002b]) and the ICDF Complex RAWP (DOE/ID-10984 [DOE-ID 2003a]). To ensure that the remedy remains protective of human health and the environment, operations and maintenance of the ICDF Complex and implementation of institutional controls will be performed in accordance with Appendix A of the RAWP, which is the *INEEL CERCLA Disposal Facility Operations and Maintenance Plan* (DOE/ID-11000 [DOE-ID 2003b]).

The ICDF Complex is expected to continue to receive waste for treatment and disposal operations at least until the year 2012. In accordance with the “National Oil and Hazardous Substances Pollution Contingency Plan” (40 CFR 300), a statutory review of the selected remedy will be conducted no less than every 5 years for sites where contamination above risk-based concentrations is left in place. Since the ICDF is a disposal facility for hazardous, low-level radioactive, and TSCA waste, reviews of the remedy will be included in the INL Sitewide 5-year remedy reviews until the year 2095, or until it is determined during a 5-year review with concurrence of the Agencies that controls and reviews are no longer necessary.

The facility has met the functional expectations and is operating properly. As of August 25, 2005, the ICDF has disposed of 152,602 tons of solid waste into the landfill, 154,882.60 gallons of liquid waste to the evaporation pond, and treated 186.53 tons of soil waste for disposal.



## 12. SUMMARY OF PROJECT COSTS

Table 12-1 provides a summary of the ICDF Complex construction costs per fiscal year. As shown, the total cost for the construction of the ICDF Complex is estimated at \$45,307,350 (estimated because completion of the Cell 2 construction is projected in October 2005). The monthly operating costs of the ICDF Complex are \$190,000, and the average monthly operating costs for the SSSTF during treatment is \$67,000. Treatment in the SSSTF decontamination and treatment facility is planned for only 6 months of each year. The ICDF Complex operating costs are planned for 12 months each year. These costs are based on the current subcontractor-operated basis, which will be complete in Fiscal Year (FY) 2007. It is planned that a subcontractor will be used beyond FY 2007 to operate the facility as well.

Table 12-1. ICDF Complex total project costs through August 2005.

Activities	Fiscal Year	Yearly Total	Cumulative Total
1. Early Design and Acceptance Criteria	FY 2000	\$2,539,94	\$2,539,943
2. Title I and Title II Designs, ROD and CERCLA Requirements	FY 2001	\$7,830,057	\$10,370,000
3. Phase I Construction			
Cell 1 of Landfill			
Evaporation ponds			
Leachate Collection System			
SSSTF Administrative Office Trailer			
Truck Scale			
Landfill and Evaporation Ponds Crest Pad Buildings			
SSSTF Decontamination Facility			
SSSTF Treatment System			
	FY 2002	\$15,748,000	\$26,118,000
4. Construction Complete			
Cell 1 of Landfill			
Evaporation Ponds			
Utilities			
SSSTF Administrative Office Trailer energized			
Operations Review Board review of DOE 435.1			
Low-Level Waste Disposal Facility Review Group			
Approval of Performance Assessment/Composite Analysis			
Construction Quality Assurance Certification			
Develop Management Self Assessment			
Energy Systems Acquisition Advisory Board			
Presentation			
Prefinal Inspection			
Decontamination Facility Ongoing Construction			
Treatment System Ongoing Construction			
Project Management			
SSSTF Support Facilities			
Government-Furnished Equipment			
	FY 2003	\$13,539,732	\$39,657,732

Table 12-1. (continued).

Activities	Fiscal Year	Yearly Total	Cumulative Total
5. Cell 2 Design and Construction*			
	FY 2004	\$991,927	\$40,649,659
	FY 2005	\$2,050,634	\$42,700,293
	FY 2005	\$600,000	\$43,300,293
	Remaining		
*Through August 21, 2005			
6. SSSTF Completion			
	FY 2004	\$1,880,333	\$45,180,626
	FY 2005	\$126,724	\$45,307,350
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act FY = fiscal year ICDF = Idaho CERCLA Disposal Facility SSSTF = Staging, Storage, Sizing and Treatment Facility			

### 13. OPERABLE UNIT CONTACT INFORMATION

Table 13-1 provides contact information for project managers affiliated with the EPA, DOE, DEQ, and the major design and remediation contractor, CH2M-WG Idaho, LLC.

Table 13-1. List of project managers with contact information.

Name	Affiliation	Address	Phone Number
Dave Einan	EPA project manager	309 Bradley Landing, Suite 115 Richland, WA 99352	(509) 376-3883
Mike Spomer	DEQ project manager	1410 North Hilton Boise, ID 83706-1255	(208) 373-0232
Nicole Hernandez	DOE project manager	PO Box 1625 Mail Stop 1222 Idaho Falls, ID 83415	(208) 526-8949
Jack Simonds	CH2M-WG Idaho, LLC project manager	PO Box 1625, Mail Stop 4142 Idaho Falls, ID 83415	(208) 526-2770

DEQ = [Idaho] Department of Environmental Quality

DOE = U.S. Department of Energy

EPA = U.S. Environmental Protection Agency



## 14. REFERENCES

- 40 CFR 261, 1999, "Identification and Listing of Hazardous Waste," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 262.11, 1999, "Hazardous Waste Determination," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 264.552, 1999, "Corrective Action Management Units," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 264, Subpart BB, 1999, "Air Emission Standards for Equipment Leaks," *Code of Federal Regulations*, Office of the Federal Register, July, 1999.
- 40 CFR 264, Subpart CC, 1999, "Air Emission Standards for Tanks, Surface Impoundments, and Containers—Applicability," *Code of Federal Regulations*, Office of the Federal Register, July, 1999.
- 40 CFR 264 Subpart DD, 1999, "Containment Buildings," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 264, Subpart F, 1999, "Releases from Solid Waste Management Units," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 264, Subpart I, 1999, "Use and Management of Containers," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 264, Subpart K, 1999, "Surface Impoundments," *Code of Federal Regulations*, Office of the Federal Register, July, 1999.
- 40 CFR 264.18, 1999, "Location Standards," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 264.114, 1999, "Disposal or Decontamination of Equipment, Structures, and Soils," *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 264.221, 1999, "Design and Operating Requirements," *Code of Federal Regulations*, Office of the Federal Register, July, 1999.
- 40 CFR 264.301, 1992, "Design and Operating Requirements," *Code of Federal Regulations*, Office of the Federal Register, January 1992.
- 40 CFR 264.302, 1992, "Action Leakage Rates," *Code of Federal Regulations*, Office of the Federal Register, January 1992.
- 40 CFR 264.310, 1986, "Closure and Post-Closure Sources," *Code of Federal Regulations*, Office of the Federal Register, May 1986.
- 40 CFR 264.552, 1999, "Corrective Action Management Units," *Code of Federal Regulations*, Office of the Federal Register, November 1999.



- 40 CFR 264.1082, 1999, “Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities—Standards: General,” *Code of Federal Regulations*, Office of the Federal Register, July 1, 1999.
- 40 CFR 268, 1999, “Land Disposal Restrictions,” *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 268.49, 1999, “Alternative LDR Treatment Standards for Contaminated Soil,” *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 40 CFR 300, 2005, “National Oil and Hazardous Substances Pollution Contingency Plan,” *Code of Federal Regulations*, Office of the Federal Register, June 2005.
- 40 CFR 761.75, 1999, “Polychlorinated Biphenyls (PCBs) Processing, Distribution in Commerce and Use Prohibitions,” *Code of Federal Regulations*, Office of the Federal Register, July 1999.
- 15 USC § 2601 et seq., 1976, “The Toxic Substances Control Act (TSCA) of 1976,” *United States Code*.
- 42 USC § 6901 et seq., 1976, “Resource Conservation and Recovery Act (Solid Waste Disposal Act),” *United States Code*, October 21, 1976.
- 42 USC § 6921 et seq., 1976, Subtitle C, “Hazardous Waste Management,” in “Resource Conservation and Recovery Act of 1976,” *United States Code*, as amended.
- 42 USC § 9601 et seq., 1980, “Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA/Superfund),” *United States Code*, December 11, 1980.
- DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory*, Administrative Docket No. 1088-06-29-120, U.S. Department of Energy Idaho Operations Office; U.S. Environmental Protection Agency, Region 10; Idaho Department of Health and Welfare, December 4, 1991.
- DOE-ID, 1994, *Remedial Design and Remedial Action Guidance for the Idaho National Engineering Laboratory*, DOE/ID-12584-152, GJPO-ESO-12, Rev. 2, U.S. Department of Energy Idaho Operations Office, September 1994.
- DOE-ID, 1997a, *Comprehensive RI/FS for the Idaho Chemical Processing Plant OU 3-13 at the INEEL—Part A, RI/BRA Report (Final)*, DOE/ID-10534, Rev. 0, U.S. Department of Energy Idaho Operations Office, November 1997.
- DOE-ID, 1997b, *Comprehensive RI/FS for the Idaho Chemical Processing Plant OU 3-13 at the INEEL—Part B, FS Report (Final)*, DOE/ID-10572, U.S. Department of Energy Idaho Operations Office, November 1997.
- DOE-ID, 1998, *Comprehensive RI/FS for the Idaho Chemical Processing Plant OU 3-13 at the INEEL—Part B, FS Supplement Report*, DOE/ID-10619, Rev. 2, U.S. Department of Energy Idaho Operations Office, October 1998.

DOE-ID, 1999, *Final Record of Decision, Idaho Nuclear Technology and Engineering Center, Operable Unit 3-13*, DOE/ID-10660, Rev. 0, U.S. Department of Energy Idaho Operations Office, U.S. Environmental Protection Agency Region 10, and State of Idaho Department of Health and Welfare, October 1999.

DOE-ID, 2002a, *Remedial Design/Construction Work Plan for the Waste Area Group 3 Staging, Storage, Sizing, and Treatment Facility*, DOE/ID-10889, Rev. 0, U.S. Department of Energy Idaho Operations Office, March 2002.

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DOE-ID, 2002c, *Idaho CERCLA Disposal Facility Construction Quality Assurance Plan*, DOE/ID-10851, Rev. 1, U.S. Department of Energy Idaho Operations Office, May 2002.

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## **Appendix A**

### **Staging, Storage, Sizing, and Treatment Facility Change Notice Summary**



## Appendix A

### Staging, Storage, Sizing, and Treatment Facility Change Notice Summary

CN #	
1	<p><u>The pad elevation at the overhead door will be lower than the building slab elevation of 9425.00.</u></p> <p>1. The Subcontractor will show where the transition lines need to be, using straight lines with angles (not curved).</p> <p>2. The Subcontractor will keep the ramp at north side at el. 4925.00 from outside edge through overhead door and past mandoor no. 14, then slope the ramp, west and south.</p> <p>3. The Subcontractor will also determine what slope will work and provide BBWI this information.</p>
2	<p><u>Correct drawings so that the dimensions from each drawing have the same end result.</u></p> <p>Drawing A-1. Dimension from face of the wall to the center-line of the building is noted wrong on the drawing. It should NOT be 30' 9". The S-2 drawing notes the correct dimension of 30' 6".</p>
3	<p><u>Masonry walls are not all dimensionly located (position / length)</u></p> <p><u>Decon Building Locker Rooms are not dimensionly located.</u></p> <p>Attached is a sketch with dimensional locations of the masonry walls.</p>
4	<p><u>Specification 10500 calls for metal lockers to be 18 inches wide by 21 inches deep by 72 inches high.</u></p> <p><u>Drawing A-9 calls for single-tier lockers 15 inches by 18 inches by 84 inches (6) required in women's room (11) required in men's room.</u></p> <p><u>If you scale the locker locations on the drawing, the maximum width for the quantity of lockers called for would be 12 inches.</u></p> <p>Lockers should be 15 inches wide (size) as noted on drawing A-9. This reduces the number of lockers from 6 to (4) in the women's locker room, and from 11 to (8) in the men's locker room. The locker width was depicted wrong on the drawings and specified wrong in the specifications.</p>
5	<p><u>The project drawings show the Contaminated Equipment Pad duct bank at differing elevations.</u></p> <p>Raise ductbank over the 18-inch encasement. Provide 2 inches of separation from bottom of ductbank and top of pipe on Drawings U-16 and S-3.</p> <p>Sheet U-17 has a typographical error. There are two elevations 4920 on the profile. The upper one should be deleted and replaced with 4922. The existing 4922 should be 4924 and the existing 4924 should be 4926.</p>
6	<p>Elevation to top of vault is at 4919.82 and vendor drawing shows elevation at 4920.82. This will require the access risers and the height of vent pipe to be decreased by 1'. Invert elevations do not change.</p> <p>The change to add one foot to the height of the oil/water separator is acceptable per drawings submitted as VDS#8, as long as the inverts remain the same. It is also acceptable to use ring and caps as the lids to the access pipes rather than the concrete lids as shown in the drawings, per the drawings submitted as VDS#8.</p>
7	<p>5/8" gypsum board on inside face of exterior walls. 50'-0" on the east wall and 30'-0" on the south wall in Men's and Women's Shower/Locker Rooms. Spec doesn't depict if 5/8" gypsum board extends to just above ceilings or to the bottom of the roof structure?</p> <p>Gypsum board will be placed on the inside face of the southernmost 50 feet of the west exterior wall and on the inside face of the west half of the south exterior wall. The gypsum board will extend up to the bottom of the beam shown in Section K on Sheet A-6.</p>
8	<p>Concrete slab at top of Lift Station. Note calls for reinforced 5'-0" × 5'-0" slab. Dimension on Section N shows 6'-0" fpr slab. Drawing U-2 shows existing grade elevation at 4919 plus. Drawing U-26, Section N indicates the grade at elevation 4918 plus. Spec does not show thickness of slab.</p> <p>Drawing U-2 does not show the lift station; it is shown on Drawing U-3. The slab is 1-ft thick with the top of the slab at elevation 4919.3. The slab is to be 6 ft × 6 ft. Please provide two additional guard posts on the west side of the duct bank to protect the lift station and the quick disconnect as directed by the Contractor in the field.</p>

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9	<p>1. Spec 3400-5 of 5 "Lifting" requires a minimum of 3,500 psi compressive strength as determined by test cylinders prior to lifting.</p> <p>2. Spec 3400-4 of 5 "Concrete Mix" requires a Cement Type of II with a 4,000 psi 28-day compressive strength.</p> <p>3. Spec 3400-4 of 5 "Vault Steps" requires grey cast iron ASTM A48 step integrally cast into manhole side walls.</p> <p>4. Spec 3400-4 of 5 "Fabrication" calls out for all exterior edges to be chamfered.</p> <p>1. The units could be lifted in Amcor's yard at 1,500 psi as determined by "Swiss hammer test." This will allow Amcor to make additional pours using same form. Units will not be shipped until compressive strength reaches 2,800 psi. Per National Concrete Pre Casters Association the handling and stripping phases rely on the Manufacturer's Quality Control Manual. Attached is manufacturer's quality requirements (Section 8A.3.7).</p> <p>2. Amcor uses Type III, 5,000 psi Concrete Mix instead of the spec'ed Mix. (See attached Concrete Mix).</p> <p>3. A plastic step needs to be used (see attached product data) in lieu of spec'ed Grey Cast iron to eliminate the possibility of rusting and causing injury to personnel accessing/egressing manholes.</p> <p>4. Delete chamfered edges for all precast.</p>
10	<p>Reuse the existing asphalt for a base under the new SSSTF paved road.</p> <p>A credit is anticipated for this activity. Disposal costs have been eliminated and base material is now onsite, opposed to acquiring base material from an outside source.</p>
11	<p>This cellar type structure is an unanticipated feature, not clearly identified in the initial pre-design SSSTF walkdown. After cultural resources and RadCon give their concurrence with removing the foundation, the Subcontractor will excavate the cellar and haul material to the CFA Landfill, for disposal. The excavation where the structure was located will be backfilled in accordance with Section 02200 - Earthwork, from the approved Construction Specifications.</p>
12	<p>Soils identified as radiologically contaminated need to be excavated and stockpiled.</p> <p>Due to the amount of contaminated material found in Area 1 and anticipated contaminated soil in Area 3 (approx. 280 yards in Area1 - Area 3 amounts unknown at this time), the ICDF contaminated stockpile that the Subcontractor was required to use will not handle the volume.</p> <p>Excavate Rad-soil areas identified by Gamma Spec. Place excavated material in Area 1.</p> <p>Identified areas need to be excavated 6 inches deep, but not less than four inches deep. Rad-soil must be excavated to a diameter of 60 feet from the location marked in the field. The stockpile will require silt fence around its perimeter if the soil is stockpiled above 4 feet or higher. Stockpile will also require clean soil 6 inches or more to be placed as a containment cover to act as a soil stabilizer.</p>
13	<p>Northings and eastings given on Drawing C-2 show the northeast corner of bldg. at N. 693050.67 E. 295542.69 and the southwest corner at N. 692948.17 E. 295407.96. This makes the distance across the north end of building of 134.73. This will put a gap between equipment pad and Decon Building of 1' 3/4".</p> <p>There is no gap between the slabs. The correct distance is shown on Drawing S-2.</p>
14	<p>The original design for the decontamination building eave height was 17 feet. For the Subcontractor's convenience, they asked to raise the building height by 1 ft (to 18-ft eave height). The Subcontractor has indicated that increasing the height of the building by 1 ft will be sufficient to install and operate the treatment equipment that will be located inside the building. It is the Subcontractor's responsibility to ensure that the treatment equipment procured will fit inside this building and be placed in a location that will allow for ease of operation and maintenance. Additionally, the Subcontractor shall submit the layout for the treatment equipment and door locations for review.</p> <p>(Note: Ovard Construction, Incorporated provided a bid during oral presentations that included allowances within their bid price to procure and construct a building with a 20-foot eave height, if required, all other designs being the same.)</p> <p>The Subcontractor may raise the building height 1 foot, making the eave height 18 feet.</p>
15	<p>The power demands of the soil stabilization system will approach 250 KVA. The specified transformer will not support this requirement,</p> <p>and will be replaced with a larger 750 kVA transformer. The specifications for this new transformer are attached. Also included in the attachment is the metering parts list for this transformer.</p>
16	<p>Reference 02200-5 of 7 lines 10–13 states that no footings or foundations are to be constructed over backfilled material.</p> <p>The specification shall be changed to read, “After removing the soil overburden, the footings, foundations for columns and concrete slabs shall be placed on a pit-run gravel fill. The gravel fill shall be constructed in layers and compacted in accordance with the plans and these specifications.”</p>
17	<p>In pre-cast concrete, welded wire fabric or rebar will be used for reinforcement. If the welded wire fabric is a pre-manufactured item, and the rebar will just be cut and tied, and no welding will be performed, then welding qualifications are not a required submittal under Spec. 03400.</p>
18	<p>Due to the safety complexity of placing and installing roof insulation and roof panels, the "Elaminator Insulation System" may be used in place of the specified installation system.</p>
19	<p>The drawings call out for a Kor-N-Seal boot for the 4" SCH40 pipe entering the top of the oil/water seperator.</p> <p>Due to the weight of the pipe, Amcor believes that the Kor-N-Seal boot will not support the pipe. Amcor can use a Galvanized threaded pipe sleeve in lieu of the Kor-N-Seal boot.</p>

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20	<p>The area designated for the clearing and grubbing stockpile is not large enough to contain materials if stockpiled in accordance with Note 8, which indicates that the material shall not be stockpiled any higher than 3.3 feet. The original planned quantity per the dimensions of Drawing C-2 was approximately 7,871cy if scaled out and held to 3.3 feet in height. The actual quantity was closer to 16,749 cy., according to the Subcontractor. During clearing and grubbing activities, the new service waste line was being tested. BBWI construction management and BBWI quality assurance personnel advised SSSTF personnel not to stockpile the material over the service waste line as depicted in Drawing C-2. Therefore the stockpile was lengthened to a distance of approximately 1005 feet, and a width of 102 feet. Scaling the drawings on C-2 the original intended length was approximately 500 feet, and the intended width was approximately 167 feet. Lineal footage difference is approximately 880 ft.</p> <p>Although the stockpile is a temporary feature to the SSSTF, the Subcontractor will still be required to red-line the current approved Drawing C-2, noting the change.</p>
21	<p>Drawing U-23 calls out to have the fiberglass primary containment anchored with six concrete expansion anchors at the bottom of the 20' lift station.</p> <p>Due to the inaccessibility of placing the anchors, and the lead time of the fiberglass primary containment unit. The Subcontractor wishes to anchor the fiberglass primary containment unit with 6" of 5000 psi grout. This will allow the lift station precast to be set in place prior to the containment unit arriving onsite and eliminating the need to place personnel at the bottom of the lift station to anchor the containment unit (this opening is only 1' on either side of the containment unit). Leak detection shown on Drawing E-11 will be placed at top of grout.</p> <p>The Subcontractor's recommended changes are approved by BBWI.</p>
22	<p>Subcontractor vendor drawings for truck scale differ from Drawing S-6. Vendor data (VDS # 78) was returned with comments from John Farrens saying submitted dimensions and details are acceptable (and recommended) with exceptions. Foundation concrete must have an <math>f_c=4500</math> psi, sub base prep as shown on "C" drawings, and show locations of electrical stub ups.</p> <p>Use vendor drawings as submitted in lieu of Drawing S-6. Revise the coordinates as follows:</p> <p>SE corner of scale: Same as shown on Drawing C-2 (N 693,145.41 E 295,581.06).</p> <p>NW Corner of scale: Revise as follows: (N 693,215.48 E295,570.06). Revise Drawing S-6 to reflect these coordinates.</p> <p>Show the grade of the concrete support slab as 4922.0. Show the finish grade of the scale as 4923.32.</p> <p>Concrete strength shall be 4500 psi.</p> <p>Grading to and from the scale will be shown on the revised C-2 drawing.</p>
23	Per Contract item No. 7.5.7, Subcontractor to be reimbursed for training costs. Increase Contract price to include training costs associated with SFP No. 8.
24	<p>On the approved Vendor Data drawing for precast lift station MH1142, it shows invert elevation of line 156988 at 4' 6" above finished floor. The Kor-N-Seal boot was installed at 6' above finished floor.</p> <p>Remove Kor-N-Seal boot and install 1/2" rebar in opening using Hilti Hit 150; install water stop using RX101 and re-grout using 5000 psi non-shrink grout. Re-core precast lift station at 4 ft 6 in. from bottom (elev. 4911.5) and install Kor-N-Seal boot.</p>
25	<p>Per Contract item No. 7.5.7., Subcontractor to be reimbursed for training costs. Increase Contract price to include training costs associated with SFP No. 29.</p> <p>REQUIRED JOB TRAINING COSTS: HAZWOPER</p>
26	<p>Per Contract item No. 7.5.7., Subcontractor to be reimbursed for training costs. Increase Contract price to include training costs associated with SFP No. 12.</p> <p>Partial personnel training for 40-Hour Hazwhoper/8-hour Hazwhoper supervisor training in support of project.</p>
27	<p>The as-built elevation for the 6" SW No. 156990 is acceptable. However, the as-builts for both 2" lines are not acceptable.</p> <p>For both 2" lines (156991 and 156992) remove Kor-N-Seal boot. Repair holes using 5000 psi non-shrink grout. Re-core both holes in the precast lift station directly below the existing holes and install Kor-N-Seal boot.</p>
28	<p>Power is needed for the Subcontractor's job trailer.</p> <p>Subcontractor will place a new pole approximately 50' southeast of existing pole 44-43. Subcontractor will also place three to four poles along the northern border of Areas #1, #2, ending south of Aspen Ave. into Area #3. Subcontractor will Install 3-50kva 480/240v pole mount transformers (GFE) on new pole, as well as one 25kva transformer on pole feeding the job trailers. Install 3-100 fused cut-outs, fused at 5 amps with arrestors, and hardware on new pole. Install new cross arm on existing pole 44-43 and slack span with #2ACSR to new pole. Connections to existing line to be completed by Wheeler Electric personnel. All temporary power equipment shall be removed after construction is completed.</p>
29	<p>Typical handhole detail on Dwg. 520030 (U-22) detail 15 indicates the inside dimensions to be 2'10" × 2'4" with the wall thickness of 4" (+-).</p> <p>Subcontractor may use 3' × 4' std (inside dimensions) with 4" wall thickness – as recommended. Subcontractor is responsible to make any adjustments required to avoid conflict with other utilities or facilities.</p>
30	<p>THE SPEC CALLS OUT ELECTRIC HEATERS CHROMALOX MODEL RBC-14-4NC.</p> <p>SPECT. MODEL HAS BEEN DISCONTINUED.</p> <p>Use replacement heater CHROMALOX STAR MODEL 14-43-F.</p>
31	<p>The testing steps on Page 8 of 8 are unclear. Specification Section 13505, lines 8–12.</p> <p>From the tie-in point to first new valve is to be tested at system maximum pressure for two hours. Delete the second sentence of Step 9, in lines 10–12 of the Specification Section 13505-8 of 8 to be consistent with requirements of a two-hour test. Add the statement that the pipe, fittings, and joints from the tie-in point of the existing underground main to the new PIV is to be tested at system pressure for two hours and will reduce the possibility of serious damage due to excessive pressure to the existing piping and upstream system.</p>



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32	<p>Victaulic has recently discontinued the as-specified Series 708W butterfly valve. Use a Victaulic Air Maintenance Device instead of the as-specified Central Model DA.</p> <p>Change model number of butterfly valve to 705W as it is available. Change model number of Water Motor Alarm to the current Model WMA-1. Allow use of Victaulic Model 757 Air Maintenance Trim Assembly to be consistent with manufacturer of the Dry pipe Valve, Victaulic Model 756.</p> <p>I Agree with this disposition. JD Jensen.</p>
33	<p>The text in Spec Section 02200, page 4 of 7, lines 21–24. The spec states that the excavated material used for backfill must be kept free of vegetation and topsoil used for finish grade shall be kept free of subsoil, vegetation, and other objectionable material and stones larger than 1-inch.</p> <p>There is no requirement to keep the topsoil free of vegetation if it is to be placed back on the excavation as topsoil.</p> <p>The trenches for the utilities to be placed in Area 2 shall be excavated and backfilled as described in Spec Section 02200, Trench Excavations, Page 4 of 7. As described in this section under Stockpiling and Disposal, “...the excavated material that is suitable for backfill shall be piled in an orderly manner a sufficient distance from the edge of the trench excavation...” It is expected that all the material removed from the excavation will be kept separate (i.e., topsoil, overburden and gravel material) and upon placement and covering the utilities with the bedding material, the stockpiled material will be placed back into the excavation in the order that it was removed. Removal of vegetation from the topsoil material is not required prior to backfilling.</p> <p>BBWI will compensate the Subcontractor for clearing and grubbing in Area #2, which states on Dwg. C-2 that Area #2 will maintain natural vegetation.</p>
34	<p>The Subcontractor requests:</p> <ol style="list-style-type: none"> <li>1. Change paragraph 2.1 page 6 of 26 - Minimum Qualifications of Equipment supplier: The experience qualification should apply to the design firm rather than to the overall “equipment supplier.”</li> <li>2. Change paragraph 5.1.6 page - Standard Commercial Product: Needs to be interpreted to allow equipment suppliers to modify their equipment as necessary to meet specification requirements, and still be considered a "standard commercial product".</li> <li>3. Subcontractor requests a list of design firms experienced in Soil Stabilization Systems technology (i.e. HVAC system) to expedite proposal process.</li> </ol>
35	<p>There is a 1280 cy decrease in plan volume to tie into the ICDF because we flattened and lowered the grading.</p> <p>There is a 1050 cy compacted volume increase to properly grade around the Decon Building.</p> <p>There is a 360 cy compacted volume to provide proper cover over the water and sewer pipes.</p> <p>The reason the volume is so low on the truck scales is that the S/C is obligated to grade to the scales. See Sections H and G on sheet S-6. It states to grade away from the scale at 1.5 to 3.0 %. We are giving them credit for the 0.75 ft of base and paving that we took out of the specs.</p>
36	<p>Existing Conditions:</p> <p>The product called out in the specification for the geocomposite is no longer produced. The only manufacture of nonwoven "polyester geotextile", Trevira Inc., does not produce geotextile for the environmental market any longer so none of the geocomposite manufactures have access to polyester nonwovens.</p> <p>Subcontractor wishes to use 60 mil HDPE textured geomembrane in lieu of 40 mil (reference submittal number 281).</p> <p>Subcontractor wishes to use Poly- Flex FNC200-2-6 geocomposite as an alternate (reference submittal number 281).</p> <p>Design Engineering Disposition:</p> <p>Use untextured 40 mil HDPE geomembrane in lieu of the 40 mil textured HDPE.</p> <p>Use GSE FabriNet Eight ( 8) oz/sy for the HDPE geonet/geotextile composite as per Vendor Data submitted 8.01.02 in lieu of the Poly-Flex FNC200-2-6.</p>
37	BBWI will reimburse Subcontractor for training costs, as per the Special Conditions of this contract.
38	Use 2” deep Neenah trench grating and frame as recommended. The vendor data for this grating system needs to be submitted for approval.
39	<ol style="list-style-type: none"> <li>1. Modify the contours at the interface boundary of the SSSTF and the ICDF in accordance with the attached Sketch No. 1. See also the Section Layout and N-S and E-W Sections. See also the text file with the adjusted volumes. By lowering and making the area flatter, the required compacted fill volume is reduced by 1278 cubic yards.</li> <li>2. Maintain the cover over the sewer, potable water, the raw water, and the firewater as shown in the plans. Provide a 15-ft transition from the edge of the trench to the design subgrade. See Sketch No. 1. The estimated increase in compacted pit-run gravel to do this is 380 cy.</li> <li>3. Provide additional grading around the Decontamination Bldg to cover the utilities and provide ramps into the building and the decontamination slab and the truck scales as shown on Sketch No 1. The estimated increase in compacted pit-run gravel to do this is 1100 cy.</li> </ol>
40	The Subcontractor is allowed to modify the length of the manhole segments as long as the pipe invert and finish grade are maintained. Other material and construction specifications of the manhole still apply.
41	Use the 24’ 0” dimension for the stoop and canopy configuration proposed by the supplier.
42	<p>Increase the size of the lift station Grinder pump impellers to increase pump capacity. This is for both lift stations and the extra pump.</p> <p>Increase the impeller size on the HPGLX200 pumps (2 HP) from 4.12-in diameter shown on the vendor data to 4.5-inches in diameter. The 4.5-in diameter impeller is within the family of impellers for the HPGLX 200 pump. It will provide additional operational contingency against unforeseen circumstances that may impair the operation of the pumps. The change in the impeller can be done at no cost.</p>

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43	A 29 1/2” swing gate is acceptable.
44	BBWI will reimburse Subcontractor for training costs, as per the Special Conditions of this contract.
45	OCI recommends that the 12" drain line be cast in place into the trench wall by means of blocking out below the pipe during floor pour approx. 2" to be replaced with water stop and concrete, which will seat the pipe in the trench wall placement. BBWI concurs with OCI’s recommendation. The main concern is to make sure the joint is water tight to avoid leakage in the joint around the pipe.
46	Supplier of the 30" × 48" Model H-20 WT Flood-Tight Bilco door over the P-trap has informed OCI that procurement of this door is 14–16 weeks out after approvals. Due to the fact there is a drain directly east of the P-trap door and slope for the Treatment Room is sloped to the drain, we suggest eliminating the flood-tight requirements for this door. BBWI concurs with the Subcontractor’s suggestion of eliminating the flood-tight door, and replacing it with a standard Bilco door for the P-trap.
47	OCI is concerned that the Kor-N-Seal boot will not work in it's intended application due to the limited space provided on the 12" drain at both Tee's where the pipe enters both trenches through the floor as shown on Section A on Drawing S-3. OCI recommends that the 12" drain line be cast in place into the trench floor without the use of the Kor-N-Seal boot. BBWI Concurs with OCI’s recommendation. The main concern is to make sure the joint is water tight and to avoid leakage around the pipe.
47R1	OCI is concerned that the Kor-N-Seal boot will not work in its intended application due to the limited space provided on the 12" drain at both Tee's where the pipe enters both trenches through the floor as shown on Section A on Drawing S-3. OCI recommends that the 12" drain line be cast in place into the trench floor without the use of the Kor-N-Seal boot. The main concern is to make sure the joint is water tight and to avoid leakage around the pipe. Use Hydrotite (hydrophilic water sealing material) furnished by Greenstreak at 1-800-325-9504 (3400 Tree Court Industrial Blvd. – St. Louis, MO) Copy of Vendor Data is attached.
48	A larger transformer was necessary for the increased power req’s at the ICDF Complex. Power Management indicated that because of the increased power req’s, the pole line on Lincoln could not accommodate this and they would allow us to pull power from Sub 2. Modifications to the design have been completed. The transformer was increased from a 500 kVA to a 750 kVA, and will be fed from a spare breaker in Substation 2.
48R1	A larger transformer was necessary for the increased power req’s at the ICDF Complex. Power Management indicated that because of the increased power req’s, the pole line on Lincoln could not accommodate this and they would allow us to pull power from Sub 2. Modifications to the design have been completed. The transformer was increased from a 500 kVA to a 750 kVA, and will be fed from a spare breaker in Substation 2. 3” conduit is adequate, the area of the conductors to be pulled is 2.744, the 3” conduit has an overall area of 7.298. 40% of the conduit area is 2.9072. The runs are long but they are relatively straight and there is a pull point in the run. If the sub wants to provide 4” conduit at no cost for ease of installation, that would be acceptable. Substitution of type EB conduit is acceptable. The plan E-14 indicates a 4”, the panel schedule was not changed. The conduits installed should be 4”. The ground should be left at a #2/0. Drawings showing the new alignment from Sub 2 with a double feed and sectionalizing switch have been submitted to OCI.
48R2	A larger transformer was necessary for the increased power req’s at the ICDF Complex. Power Management indicated that because of the increased power req’s, the pole line on Lincoln could not accommodate this and they would allow us to pull power from Sub 2. Reference: (SFP 19 – FCR 02). Modifications to the design have been completed. The transformer was increased from a 500 kVA to a 750 kVA, and will be fed from a spare breaker in Substation 2. Reference: (SFP 85 – FCN 89). 3” conduit is adequate, the area of the conductors to be pulled is 2.744, the 3” conduit has an overall area of 7.298. 40% of the conduit area is 2.9072. The runs are long but they are relatively straight and there is a pull point in the run. If the sub wants to provide 4” conduit at no cost for ease of installation, that would be acceptable. Substitution of type EB conduit is acceptable. The plan E-14 indicates a 4”, the panel schedule was not changed. The conduits installed should be 4”. The ground should be left at a #2/0. Drawings showing the new alignment from Sub 2 with a double feed and sectionalizing switch have been submitted to OCI. <u>It is advantageous for the project to do the following:</u> Place the new 4-inch conduit coming from Substation #2 to the transformer in the same duct bank which connects the sanitary lift station, the admin trailer and the transformer as shown on Dwg U-13 and DCN 3. See attached sketch 1 of 2. Change the 2-inch power conduit from the admin trailer to the truck scale to 3/4 -inch. Combine this with the 2-inch conduit coming from the transformer. See attached sketch 1 of 2. Install four 2-inch conduits from hand hole HH-YDJ-FO-180 to the admin trailer for communications. See attached sketch 1 of 2. Reconfigure the concrete pad for the new 750 kW transformer, to accommodate the larger size transformer. See attached sketch 2 of 2. Reference: (SFP 122 – FCN 119). CN #48R2 takes precedence over CN #48 and CN #48R1.

CN #	
48R3	<p>A larger transformer was necessary for the increased power req's at the ICDF Complex. Power Management indicated that because of the increased power req's, the pole line on Lincoln could not accommodate this and they would allow us to pull power from Sub 2. Reference: (SFP 19 – FCR 02).</p> <p>Modifications to the design have been completed. The transformer was increased from a 500 kVA to a 750 kVA, and will be fed from a spare breaker in Substation 2. Reference: (SFP 85 – FCN 89)</p> <p>3” conduit is adequate, the area of the conductors to be pulled is 2.744, the 3” conduit has an overall area of 7.298. 40% of the conduit area is 2.9072. The runs are long but they are relatively straight and there is a pull point in the run. If the sub wants to provide 4” conduit at no cost for ease of installation, that would be acceptable.</p> <p>Substitution of type EB conduit is acceptable.</p> <p>The plan E-14 indicates a 4”; the panel schedule was not changed. The conduits installed should be 4”.</p> <p>The ground should be left at a #2/0.</p> <p>Drawings showing the new alignment from Sub 2 with a double feed and sectionalizing switch have been submitted to OCI.</p> <p><u>It is advantageous for the project to do the following:</u></p> <p>Place the new 4-inch conduit coming from Substation #2 to the transformer in the same duct bank which connects the sanitary lift station, the admin trailer and the transformer as shown on Dwg U-13 and DCN 3. See attached sketch 1 of 2.</p> <p>Change the 2-inch power conduit from the admin trailer to the truck scale to 3/4 -inch. Combine this with the 2-inch conduit coming from the transformer. See attached sketch 1 of 2.</p> <p>Install four 2-inch conduits from hand hole HH-YDJ-FO-180 to the admin trailer for communications. See attached sketch 1 of 2.</p> <p>Reconfigure the concrete pad for the new 750 kW transformer, to accommodate the larger size transformer. See attached sketch 2 of 2. Reference: (SFP 122 – FCN 119).</p> <p>Rev 3:</p> <p>SSSTF is supplying the ICDF 100 Amps of power. ICDF has increased their power requirements to 200 amps. Add an additional 100-amp service to the ICDF boundary as shown on the attached sketches 1-3. Use the existing panel, BCC-P21-49.</p> <p>Attached is an example procedure performed by Wheeler Elec. on other switches that has worked well in the past and has been approved by INTEC Power Ops. The S/C shall update this procedure specifically for the sectionalizing switch for the SSSTF (ICDF complex) and submit as a vendor data item.</p> <p>CN #48R3 takes precedence over CN #48, CN #48R1, and CN #48R2.</p>
49	<p>If the fittings are Driscopipe, then they are made from PPI approved PE3408 resins. This could be verified by inspecting the stamped text on the fittings themselves. The letter from NOVA Chemicals states that WL pipe may be fused to PPI approved PE3408 resins. This addresses compatibility. He made no statements as to certifying joint integrity.</p> <p>BBWI will allow the Subcontractor to use the WL pipe as an OR EQUAL pipe.</p>
50	<p>The lift station lid thickness needs to be increased to give enough room for the Bilco door hardware and to make the casting process easier/cleaner.</p> <p>Increase lid thickness by 4” to allow better casting of Bilco door. Reorient support bracket as required.</p>
51	<p><u>Subcontractor believes it will be very difficult to measure how much make-up water can be measured and introduced by Hydro-Pump.</u></p> <p>Initially, the pipe shall be raised to test pressure and allowed to stand without makeup pressure for at least 1 hour, to allow for expansion of the pipe. After one hour, the test section shall be pressurized to the test pressure, the pump turned off, and the final test pressures shall be held for 30 minutes. During the 30-minute time period the pipe joints shall be inspected to verify there is no leakage. If there are no visual leaks or significant pressure drops during the final test period, the pipeline passes the test.</p> <p>Note – This is a variation from the specifications and BBWI reserves the right to impose the specifications as they are written if satisfactory testing is not accomplished.</p>
52	<p>BBWI believes that it is unnecessary to make the firewater connection inside the SSA fence. An agency review would be required prior to dismantling the SSA fence, and moving up to 50 rad boxes to a temporary location outside of the SSA, as well as cutting and repairing asphalt inside the SSA.</p> <p>BBWI proposes to tie into the firewater line at a location approximately 25 feet north of the SSA fence.</p> <p>Change the tie in point for the firewater line shown on U-6 and U-8 to what is shown on the attached sketch FCN #46 – Sketch #1. Provide addition 6” HDPE encasement to extend a minimum of 10 ft beyond the 2-inch pressure sewer line. Remove the concrete encasement from the 2-inch pressure sewer line. Modify the alignment of the 2-inch pressure sewer line and manhole as shown on Sketch #1 to be compatible with the new firewater pipe alignment.</p>
52R1	<p>BBWI believes that it is unnecessary to make the firewater connection inside the SSA fence. An agency review would be required prior to dismantling the SSA fence, and moving up to 50 rad boxes to a temporary location outside of the SSA, as well as cutting and repairing asphalt inside the SSA.</p> <p>BBWI proposes to tie into the firewater line at a location approximately 25 feet North of the SSA fence.</p> <p>Change the tie in point for the firewater line shown on U-6 and U-8 to what is shown on the attached sketch FCN #46 – Sketch #1. Provide addition 6” HDPE encasement to extend a minimum of 10 ft beyond the 2-inch pressure sewer line. Remove the concrete encasement from the 2-inch pressure sewer line. Modify the alignment of the 2-inch pressure sewer line and manhole as shown on Sketch #1 to be compatible with the new firewater pipe alignment.</p> <p>Provide cathodic protection to the new tee from the existing 8-inch firewater line, the PIV, and the 90-degree bend immediately west of the PIV. This is to be done by providing a jumper from the existing cathodic cable, which is running parallel to the existing 8-inch FW line. See Sketch 1 and 2 (FCN #46 – Rev 1).</p> <p>Note: A tamper switch is not required on the PIV.</p>

CN #	
53	<p>1. OCI suggests that Bechtel should not reuse the waste boxes for mixed (stabilized) soils.</p> <p>2. As discussed in orals previously, Besser mixers do not run in reverse.</p> <p>BBWI's response:</p> <p>1. The Besser mixers do not run in reverse. As previously discussed and agreed upon, reversible mixers are not required.</p> <p>2. The treatment equipment needs to be designed to accommodate a 10 cy roll-on/roll-off to receive the stabilized waste.</p>
53R1	<p>The Besser mixers do not run in reverse. As previously discussed and agreed upon, reversible mixers are not required.</p> <p>No change to the specification. Per the specification, the treatment unit shall be capable of delivering the treated soil into <math>2 \times 4 \times 8</math>-ft boxes or a standard 10-yd<sup>3</sup> roll-on/roll-off container. The boxes are not completely full and may have enough capacity to be reused even with the additional reagent material. The unit needs to be capable of discharging into <math>2 \times 4 \times 8</math> boxes.</p>
54	<p>On approved Drawings E-1 (Vendor data number 71), the roof bracing cables between column lines #3 and #4 will be located approximately 3" below roof purlins.</p> <p>Supplier wishes to move these roof bracing cables to the next bay to the south between column lines #2 and #3. This will eliminate any possible interference with the equipment located in the treatment area room.</p> <p>BBWI's response:</p> <p>It is approved to move the roof bracing cables to the south, between column lines #2 and #3 as requested, instead of placing the cables between column lines #3 and #4.</p>
55	<p>1. Specification Section 7.2 - The performance test calls out for Waste soils to be used. OCI plans to use inert material, rather than waste soils.</p> <p>2. Specification Section 8.4 - Please define "Necessary services".</p> <p>BBWI's response:</p> <p>1. The use of inert material for testing is acceptable</p> <p>2. The intent of the paragraph is to provide the name, address and phone numbers of a permanent service organization who can provide warranty and maintenance service requests in a timely manner.</p> <p>VOID</p>
56	<p>Per the specifications, it is identified that all identification ribbon is to be GFE. Service waste is to be identified as Waste water and the only ribbon supplied is Sanitary Waste.</p> <p>BBWI's response:</p> <p>Use ribbon containing the words: SERVICE WASTE. It is understood that this is available from the Subcontractor which constructed the Service Waste Project, last year.</p>
57	<p>Supplier requests acceptance of Or-Equal Manufacturer and Material for Toilet Partitions. Supplier is submitting on Solid Phenolic Material in lieu of Solid Plastic.</p> <p>BBWI's disposition:</p> <p>Agree with the supplier's proposal of "Or Equal" Solid Phenolic Resin.</p>
58	<p>The 2" RW line coming from the building on Drawing U-14 shows a thrust block at the 90.</p> <p>For ease of construction, the Subcontractor wishes to eliminate the 90-degree bend and the thrust block and place the pipe on a radius parallel to the sewer pipe (2-inch WQ) line in same area is?</p> <p>BBWI's disposition:</p> <p>Agree with proposed change.</p>
59	<p>Per the contract Drawings (U-2). The 6" RW-NO-156973 line shows going under the 12" FW line.</p> <p>OCI wishes to run the RW line over top of the FW line.</p> <p>BBWI's disposition:</p> <p>Run the RW over the FW pipe line. Maintain a minimum of 5 ft of cover over the RW Pipe.</p>
60	<p>It was determined that the currently designed 50-pair phone cable into SSSTF was not enough if the 60% spare recommendation of telecommunications is taken into account. The current design shows a 50 from INTEC into a pull box, then two branches of 25-pair cables: one to admin trailer and one to another pull box near Decon Building. From this second pull box are 2 more 25-pair cables: one to Decon Building and one to a third pull box. The third pull box is where the CHM2 Hill design connects.</p> <p>OCI is to install a second 50-pair cable. The cable will be pulled from INTEC in an existing spare interduct and the 25-pair cable in the admin trailer will be replaced with a 50-pair cable. These two changes will provide the spares recommended.</p>

CN #	
61	<p>Network fiber is separate from the to-be-designed voice paging system fiber.</p> <p>Incorporating the voice paging fiber into same cable as network fiber will only require one pull.</p> <p>Replace 12 single-mode fiber cable with a 36 fiber cable (24 multi-mode, 12 single-mode). Suggested part number DX36-090D-24W3EB/1UC-12S.4MD/900-OFNR from Optical Fiber Corporation. This part number is in conformance with Section 16123 of Specification, SPC-1485.</p> <p>Reference: Drawings 520079, 520081, 520082, 520086, 520078.</p>
61R1	<p>Replace the 36-fiber cable (24 multimode, 12 single mode) dictated in CN 61, with the original specified 12 single mode fiber cable.</p> <p>CN 61 has been negotiated for \$472.00 on 1/2/03. The description change in CN 61 is henceforth canceled.</p>
62	<p>The 18” × 76 ft CMP culvert to be installed underneath the east end of Aspen Ave. will not fit. Delete this culvert.</p> <p>The 12” × 50 ft HDPE temporary culvert to be installed underneath the old asphalt road is not necessary. Delete this culvert.</p> <p>Remove these culverts because they are not necessary. For the culvert underneath the east end of Aspen, excess rainfall will infiltrate or pond and drain to the south around the ICDF. For the culvert underneath the old asphalt road near Lincoln Ave, the runoff will run north toward the river along Lincoln Ave.</p>
63	<p>There is confusion with locations of lifting inserts for the pre-cast concrete. Amcor has given a dimension with a note for a variance. OCI would like to change the note on the drawing to install lifting inserts as determined by manufacturer.</p> <p>BBWI’s response:</p> <p>Design engineering concurs with OCI’s recommendation.</p>
64	<p>The alignment of the 16-inch service waste pipeline was changed and an angle point was constructed near the east end of the firewater pipeline (12" FW-NO-156972) that goes through the security area. A thrust block was constructed on the service waste angle point. A portion of the thrust block interferes with the new firewater alignment. A portion of the thrust block must be removed so that the firewater pipeline extending to the east can be installed. Using a concrete saw, cut 12-18 inches from the north portion of the thrust block so that the new firewater pipeline can be installed.</p>
65	<p>The following three types of sand are acceptable for use as bedding material for the HDPE liner as described in Spec Section 02598.</p> <ol style="list-style-type: none"> <li>1. Material is available in the large sand stockpile in the southwest corner of the Borax Pit located in the SW corner of the pit. Coordinate removal with Mike Jackson at 208-526-8872 or Robert Bull at 208-520-3052.</li> <li>2. Concrete sand may be used.</li> <li>3. The ICDF landfill has generated a large volume of sand.</li> </ol>
66	<p>U.P.C. requires cleanouts at the ends of mains and 2'-0" outside of buildings. Because 10'-0" radius bend of Drisco pipe adjacent to building on U-14 is virtually unattainable Atlas mechanical makes the following recommendation. Atlas suggests using proper abs drainage pipe and fittings to satisfy the cleanout requirement and making transition on east-west run.</p> <p>BBWI’s response:</p> <p>Install a cleanout 2 ft outside the building, as proposed by Atlas with the ABS materials. Install two guard posts 3 ft away from the building 5 ft apart, with the cleanout centered between the guard posts.</p>
67	<p>Time requirements identified in this spec section identifies that the forms cannot be removed on formwork not supporting concrete for 32 hours. For formwork supporting concrete the spec calls to wait for the 28 day compressive strength, except as permitted under "Early Loading of New Concrete. "OCI requests to use ACI 318 standard (included in specification) of 12 hours prior to stripping forms.</p> <p>BBWI’s response:</p> <p>Reference Specification 03300 page 12 of 14 lines 20–23 <u>Formwork Not Supporting Weight of Concrete</u>. Change the time of stripping forms from 32 hours to 12 hours. All other provisions of this section shall apply.</p> <p>For formwork supporting Weight of Concrete shall comply with lines 25 through 27 on page 12 of 14 and paragraph <u>Early Loading of New Concrete</u>: on lines 15–18 page 03300-11 of 14.</p>
68	<p>The depth of the 12" drain line (Invert elevation 4919.00) and finished elevation of Contaminated Equipment pad concrete (Elevation 4924.00 at the P-trap) is fairly shallow and may freeze. There is a concern of this pipe freezing or expanding/contracting and pulling away from the west trench. Another concern would be that all the rain water and snow melt that will be gathered in this trench will end up in the P-trap and be treated as contaminated material.</p> <p>BBWI’s response:</p> <p>See the attached sketch to install anchors in the pipe to control any contraction or expansion of the 18-inch and 12-inch pipe under the slab. It is emphasized that the pipe is to be backfilled and compacted as specified. It is understood that drain water from the contaminated equipment pad will flow into the system and end up as wastewater.</p>
68R1	<p>See the attached sketch to install anchors in the west trench to control any contraction or expansion of the 18-in and 12-in pipe under the slab. It is emphasized that the 18-inch pipe is to be backfilled and compacted as specified.</p> <p>On the east end of the 18-inch pipe, provide slack in the liner and pipe boot to accommodate any contraction of the pipe.</p> <p>Extend the 12-inch pipe 10 inches into the P-trap. Using a Kor-n-Seal and pipe-joint lubricant, make a slip-joint seal on the east end of the 12-inch pipe.</p> <p>Change the invert elevation of the 12-inch pipe from 4919.00 to 4919.20 as shown on the sketch.</p> <p>It is understood that drain water from the contaminated equipment pad will flow into the system and end up as wastewater.</p> <p>Use 12” Long Thread Carbon Steel Kwik Bolt II as manufactured by Hilti (Item No 00045416 Catalog Pg 8 of 30). Embed bolt 6 inches. Verify back up ring thickness of 1.34 inches and flange thickness on HDPE pipe as 1.8” to provide adequate threads. Place washer between nut and backup ring if required. Paint back up ring and bolts with black mastic after installation.</p>

CN #	
69	<p>Plans call for installing valves near the 90-degree bends on the 6” RW-NO-156973 and the 12” FW-NO-156972. No guard posts are shown. The 2-inch sewer pipeline is shown below the FW, RW and SW pipelines. This change is to clarify the types of valves on the FW and the RW, and to clarify whether guard posts are required around the valves, as well as clarifying the vertical location of the 2-inch sewer pipeline.</p> <p>A Post Indicating Valve (PIV) shall be installed on the FW pipeline (Ref 13505-5 of 8). This valve is not to have electrical supervision installed. See detail 23 on Drawing U-25.</p> <p>A valve is to be installed on the RW and shall be a ball valve in accordance with lines 13 and 14 on page 02713-4 of 7. A riser box shall be installed on the valve as shown on detail 25 on Drawing U-25.</p> <p>Install 5 guard posts in a circle around the two valves, equally spaced.</p> <p>On sheet U-5, install the 2-inch sewer pipeline (WQ-NH-156976) above the FW, RW, and the SW pipeline and maintain a minimum of 5 ft of cover. On Drawing U-4, revise the alignment of the sewer line. The sewer line is to be constructed on the south and east of the FW and the RW to Manhole MAH-YDJ-WQ-603. It then shall cross over the FW and RW to the designed alignment as shown on Drawing U-4.</p>
70	<p>An alarm system design was needed to connect the ICDF Complex to INTEC-604 via the High Level Waste Operations distributed control system. The Subcontractor is to install equipment and conductors as shown on the attached drawings. A list of parts already purchased by BBWI is also included; therefore this equipment does not need to be procured by the Subcontractor.</p>
71	<p>Detail 5 (Grid A7) on Drawing S-3 calls for a keyway with a water stop at the construction joints. The keyway needs to be deleted so that the structures are more constructable.</p> <p>BBWI’s response:</p> <p>Delete the keyway at the construction joints. Provide a waterstop at the construction as required by the plans.</p>
72	<p>The 6x2 encasement pipe (HDPE) for service waste line was called in the spec as HDPE SDR 17.0 . Subcontractor requests to use SDR 11 for the 2" line due to being an upgrade of material from SDR 17 to SDR 11.</p> <p>BBWI’s response:</p> <p>This change is allowable as long as all pieces being welded together are all SDR 11 for the 2” pipe.</p>
73	<p>The specs don’t allow for use of Sclair piping manufactured by KWH Pipe. Need to add this pipe manufacturer for the large-bore piping.</p> <p>BBWI’S response:</p> <p>The Subcontractor is allowed to use Sclair pipe manufactured by KWH Pipe. KWH is an approved manufacturer of HDPE Pipe.</p>
74	<p>The specs don’t allow for use of Sclair piping manufactured by KWH Pipe. Need to add this pipe manufacturer for the large bore piping.</p> <p>BBWI’S response:</p> <p>The Subcontractor is allowed to use Sclair pipe manufactured by KWH Pipe. KWH is an approved manufacturer of HDPE Pipe.</p>
75	<p>Subcontractor requests to use double encasement and/or concrete at all 90 degree bends and tees for testing purposes, and for easier and faster construction of the 6 × 2 potable water encased pipe.</p> <p>BBWI response:</p> <p>Allow Subcontractor to use double encasement and/or concrete at all 90 degree bends and tees for testing purposes. The Subcontractor must still meet all the standards and requirements referenced in the Spec. 02713 and 02733.</p>
76	<p>The specs require Thermite Weld Wire Connections to metallic surfaces on the Underground Fire Protection System.</p> <p>BBWI response:</p> <p>Delete the requirements in Spec, 13505-6 of 8 lines 27–45 to add Thermite Weld Wire Connections to the underground fire protection piping outside the INTEC perimeter fence. The wire connections are not required outside the INTEC perimeter fence. Following is justification from Ken Graff, Subject Matter Expert on Cathodic Protection.</p> <p>The fire water system metal components outside the INTEC perimeter fence should not be connected to the cathodic protection system inside the INTEC perimeter fence. Connecting the components outside the fence to the cathodic protection system inside the INTEC facility would provide a current path for cathodic system-induced stray currents through the soil to the raw water, potable water, fencing, and other metal system, which may have a separate path for stray currents to return into the cathodic protection system inside the INTEC facility. Discontinue connecting the jumpers and cables to the components of the fire water system outside of the INTEC perimeter fence.</p>
77	<p>The Subcontractor cannot make the weld as shown in Drawing U-22 to attach the vertical pipes inside the oil/water separator to the entrance and exit piping. Subcontractor wishes to use flanged joint to attach the two pipes in the oil/water separator.</p> <p>BBWI response:</p> <p>Allow the S/C to use flanged connections to the vertical HDPE pipe inside the oil/water separator. In addition, the S/C is allowed to use an HDPE/Stainless Steel nipple on the top of the vertical pipe so that a screwed cap can be installed as shown on the plans.</p>

CN #	
78	<p>Spec. 02713- 3 and 4 of 7 calls for PVC fittings for underground raw water lines. Ball valves are specified for the raw water.</p> <p>The potable water valve is specified as a Clow 6100. Subcontractor requests using a mechanical joint ductile iron class 350 fitting, as submitted on submittal #189-095.</p> <p>BBWI response:</p> <p>Allow the Mechanical Subcontractor (S/C) to use mechanical joint ductile iron class 350 fittings as submitted on submittal #189-095. The fittings shall be coated with “mastic” prior to backfill. Fittings and valves which have cathodic protection need not be coated with mastic.</p> <p>The S/C shall furnish and install Clow, F-6102 flange to flange resilient seated gate valves on the connections to the potable water and raw water at the location shown on Grid C&amp;D/3 on Drawing U-6. The valves shall have a valve box as shown on detail 25 Drawing U-25.</p> <p>The valves and metal fittings on the raw and potable water in the area shown on Drawing U-6 Grid C-3 and D-3 shall be protected with cathodic protection. The cathodic protection tap shall be made at the fire hydrant located just to the northwest of potable water valve CWV-UTI-1513. The cathodic protection cable shall be routed from the fire hydrant to valve CWV-UTI-1513 (Bury a minimum of 3 ft), then to the tee which taps into the existing RW line. The cathodic protection shall then be routed to RW valve RWV-UTI 1512. See typical cathodic details on sketch 2 of 2 – FCN #46 – Rev 1 (Copy Attached).</p>
79	<p>The service waste pipe line was installed last year. It was connected to the existing service waste on the corner of Sequoia and Redwood Streets. The alignment of the service waste was changed from plan and a thrust block was placed near the tie in point of the SSSTF FW line. This thrust block is in conflict with the alignment of the FW pipeline.</p> <p>BBWI response:</p> <p>Remove the thrust block that is in conflict with the alignment of the new firewater line. The removal of the thrust block is allowed by the PLEXCO HDPE design manual because the service waste has joints that have been fused and the stresses are spread along the pipe and are not concentrated at angle point as in the case of pipe with joints.</p> <p>When the thrust block is being removed, use extra care to avoid damage to the HDPE service waste pipe line. After the firewater pipe has been installed, provide compaction in accordance with the specs around and under the service waste and FW pipes including hand tamping under the haunches of the pipes.</p>
80	<p>Vendor drawings show a double-pitch canopy; construction drawings show single pitch but detail double pitch.</p> <p>BBWI response:</p> <p>Agree with Subcontractor’s recommendation to use a single-pitch canopy over the south doors as shown on the submitted sketch.</p>
81	<p>B31.3 Requires a visual inspection of the pipe joints during inspection and testing. Visual inspection of the pipe joints is not possible because the pipe is double contained.</p> <p>BBWI’s response:</p> <p>A waiver to allow for leak detection after an 8-hr pressure test is allowed by a waiver signed by DOE. OCI has a copy of the waiver to allow testing of the double-lined pipe through filling the pipe for 8 hrs and then looking for leaks. The text from the waiver is provided below:</p> <p>Instead of examining each joint or connection on the inner (carrier) pipe, each leak detection manhole and any additional access point will be examined to determine if the system leaks. This will still meet the intent of the code by examining for leaks in this manner.</p> <p>Each of the systems have double encasement piping that will under go a hydrostatic leak test at not less than 1-1/2 times the design pressure as required of Section 345.4.2 with the test pressure being held for a minimum of 10 minutes. For the inner (carrier) pipe the test sequence will require the test pressure be held at 1-1/2 time design pressure for one hour. At that time the test pressure will be reduced to design pressure and held for 7 additional hours. This total of an eight hour period will be sufficient time for any leakage at a given joint or connection to accumulate enough volume to run down to the nearest leak detection manhole or access point.</p> <p>Each of these systems is an open-ended line (i.e., one end of the system is opened to the atmosphere). Testing to the required 1-1/2 times design will ensure system integrity is maintained.</p> <p>OCI needs to be responsible for providing the procedure back to us that they would like to use regarding this testing. This procedure must meet the requirements defined in the waiver and the intent of the specification. They can submit the procedure in an SFP referencing the waiver. We will then review, comment, and approve as quickly as possible.</p>
82	<p>A Bypass line exists with a quick disconnect, check valve, and gate valve as shown on Dwg. U-23, grid C-D 2 and in Section J.</p> <p>BBWI’s response:</p> <p>Delete this bypass line, including the tee on the double-lined SW line from the design.</p>
83	<p>Spec 13505-3 of 8 lines 1–3 call for equipping the firewater sectional and control valves with electrical supervision. In August of 2002, the INEEL Fire Marshall deleted the need for providing electrical supervision for sectional (PIV) valves on firewater lines.</p> <p>BBWI’s response:</p> <p>There is not a need to provide electrical supervision for the PIVs on this project except for valve FWV-UTI 7105 located south of the Decon Bldg. BBWI will install locks on the PIVs after the project has been accepted.</p> <p>Delete the 1 × 1 Comm Duct bank from sheet U-14 near the PIVs back to hand hole HH-YDJ-FO-181 on sheet U-2 as shown on Sketches 1 of 3 and 2 of 3. Install a 1 × 1 Comm Duct bank from FWV-UTI-7105 to the Decon Building and stub up into the building. Provide an electrical connection to PIV FWV-UTI-7105 from the fire alarm control panel in accordance with the plans and specs.</p> <p>Delete a section of 1 × 1 Comm duct bank extending south from hand hole HH-YDJ-FO- 174 as shown on Sketch 3 of 3.</p> <p>Patch penetrations not used in the hand holes.</p>

CN #	
84	<p>Per Spec. Section 02732-7 of 9 lines 35–41, tees for the decon water and pumping system shall be connected using no less than two mechanical joints with no more than one butt-fusion joint.</p> <p>BBWI response:</p> <p>Change Section 02732, page 7 of 9, lines 35–41 to the following:</p> <p><u>HDPE Pipe Joints:</u> Butt-fusion joints, including tees and fittings, shall be made in accordance with the manufacturer’s requirements for joining double-encased pipe lengths.</p>
85	<p>Subcontractor may eliminate the thrust blocks on the HDPE potable water pipe. Tee connection to the existing potable water pipe shall be cast in concrete as shown on the details.</p>
86	<p>Subcontractor may use a "dead man" to cover both the FW pipe and the RW pipe. This "dead-man" was reviewed by 3-D fire and a 6 × 8 × 3 dead-man with mega-lug fittings for the pipe will be placed. The "dead-man" will be moved to the main pipe running north/south approximately 4' south.</p>
87	<p>Change the exit invert elevation of the P-trap from 4919.00 to 4918.85.</p>
88	<p>Attached is a list of the changes to be made to the original construction document package, specification/drawings as discussed during the 9/9/02 meeting.</p> <p>Additionally, the following changes also need to be made:</p> <ol style="list-style-type: none"><li>1. Add another dedicated circuit/receptacle in the communications room on the north wall. (This was requested for ease of isolation/operation. It is unrelated to UPS size).</li><li>2. The power panel in the admin trailer should have a number. The reserved number is LP-YDJ-57. This should show up on Subcontractors drawing and be used in circuit labeling. The Subcontractor should use a 57#1, 57#4,6 type labeling system at the receptacles and LP-YDJ-57#8,10 at equipment.</li><li>3. The plumbing isometrics on sheet 2 of the vendor drawings will need to be changed to match the new location of the mop sink.</li><li>4. Split loads in data room between two breakers. This room will have multiple computer terminals.</li></ol> <p>Admin. Trailer</p> <p>Changes to Drawing V/D+L #203</p> <p><b>Floor Plan:</b></p> <p>Changing doors for office</p> <p>Changing size of custodial closet, adding 5’ deep wall</p> <p>Subdivide conference room = Split in ½ w/ notch</p> <p><b>Foundation:</b></p> <p>Changing from piers to foundation wall</p> <p>Showing crawl space on foundation plan</p> <p><b>Building:</b></p> <p>Changing type 2 non-rated to type 5 non-rated</p> <p>Changed 1/2” sheetrock to 5/8” sheetrock</p> <p>Skirting changes ½ fire rated plywood on sheeting</p> <p>Add access doors to foundation minimum of 22” × 30” @ plumbing and by HVAC (Mechanical Room) on 70’ wall</p> <p><b>Elevations:</b></p> <p>Building lettering/numbers will be supplied by OCI</p> <p>Windows – metal vs vinyl – spec calls for metal/changing to vinyl</p>



CN #	
88 (cont.)	<p><b>Electrical:</b> Janitor sink room receptacle changing location and adding GFCI for receptacle Adding dedicated 20 amp receptacle for printer in 2<sup>nd</sup> cubicle Change lighting grid to accommodate floor plan change to conference room Adding data and outlet to reflect floor plan change to conference room Provide floor penetrations – 2 each, 2” PVC in Electrical Room (NE corner) Change Switches to accompany floor plan change Review circuits 1–7 on Power Schedule on electrical drawing for wire size, breaker type and breaker size Identify and label the communication jacks per drawing in spec Drawing E-1</p> <p><b>Cabinet Change:</b> Delete 30” of cabinet and add key board slide tray Extend wall to 42” tall Add 18” countertop to top of cabinet “B Unit” data/voice cannot set into cable tray. Will be run to main line and coiled to be installed by others. Painted w/fire retardant paint or fire retardant plywood. I hour fire rating or equal.</p> <p><b>Fire Alarm:</b> Move horn strobe to accommodate floor plan</p> <p><b>HVAC:</b> No Changes.</p>
89	Waste Generator Services has requested the services of OCI personnel and equipment to off load poly–tanks in support of SSSTF operations. The tanks will be rigged and lifted off a transport and placed inside the SSA, located inside INTEC. OCI will perform all work necessary to off-load and place these items. This construction management change notice allows OCI to perform this work under PWO-02-052.
90	Waste Generator Services has requested the services of OCI and their sub tier Desert Sage, to place backfill material (gravel) inside the SSA graveled storage area, south of Sequoia Avenue. This gravel material will be graded and compacted. A culvert will be excavated out of the area, and the resulting void filled with gravel. Any pavement removed during the excavation will be replaced when asphalt activities take place on Redwood Street, and Sequoia Avenue. This work will be covered under PWO-02-052 in support of the SSSTF project.
91	<p>The depth of the 12" drain line (Invert elevation 4919.00) and finished elevation of Contaminated Equipment pad concrete (Elevation 4924.00 at the P-trap) is fairly shallow and may freeze. There is a concern of this pipe freezing or expanding/contracting and pulling away from the west trench. Another concern would be that all the rain water and snow melt that will be gathered in this trench will end up in the P-trap and be treated as contaminated material.</p> <p>BBWI’s response:</p> <p>See the attached sketch to install anchors in the west trench to control any contraction or expansion of the 18-in and 12-in pipe under the slab. It is emphasized that the 18-inch pipe is to be backfilled and compacted as specified.</p> <p>On the east end of the 18-inch pipe, provide slack in the liner and pipe boot to accommodate any contraction of the pipe.</p> <p>Extend the 12-inch pipe 10 inches into the P-trap. Using a Kor-n-Seal and pipe joint lubricant, make a slip-joint seal on the east end of the 12-inch pipe.</p> <p>Change the invert elevation of the 12-inch pipe from 4919.00 to 4919.20, as shown on the sketch.</p> <p>It is understood that drain water from the contaminated equipment pad will flow into the system and end up as wastewater.</p>
92	<p>Adjustments are required to maintain the anchor bolts in the center of the footing and accommodate the hoop bars in the corner piers, the intermediate piers, and the interior piers.</p> <p>For the corner pier, change the 1 ft 4 in dimension in each direction to 1ft 7in. Center hoop bars in the pier. For the intermediate and interior piers, adjust the rebar to provide 2.0 inches clear from the edge of the rebar to the edge of the concrete. The anchor bolts will not be centered in the pier pattern.</p> <p>Sketches of the proposed layout were submitted to BBWI on 9.04.02 and are included in the project file. They are available on request.</p>
93	<p>Delete the concrete encasement of the 4” WQ-NH-156979 from the lift station. (See Grid C-6 on Dwg U-3 and Grid D-3 on Drawing U-13.)</p> <p>Increase the length of the concrete encasement on the 4” CW-NH-156975 a minimum of 10’ ft north of the intersection of sewer pipe WQ-NH-156979 with the potable water line 4” CW-NH-156975. The Subcontractor shall ensure that the CW line is encased in concrete or secondary containment where the piping is within 10 ft of any other service line.</p>
94	<p>The Subcontractor shall maintain at least 2” of cover between the rebar and the edge of the concrete on the sides and top of the duct bank and at least 3” of cover between the rebar and the bottom of the duct bank. A gap of at least 0.75” shall be maintained between the outer wall of the pipe and the rebar for the stirrups. The rebar lap on the stirrups shall be a minimum of 2”. This will increase the height of the duct banks shown on Sheet U-21, Details 5 and 8 by a minimum of 1”.</p> <p>The duct bank shown in the drawings U-5 and U-6, for the east-west run is a horizontal (Detail 8, Sheet U-21). This duct bank should be a vertical (see Detail 5, Sheet U-21). The duct banks will enter the hand holes HH-YDG-FO-175 and HH-SFE-FO-176 vertically, from the east and west as shown in Detail 5, Sheet U-21, and exit to the south from both hand holes in the horizontal position, as shown in Detail 8, Sheet U-21.</p>

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94R1	<p>The Subcontractor shall maintain at least 2” of cover between the rebar and the edge of the concrete on the sides and top of the duct bank and at least 3” of cover between the rebar and the bottom of the duct bank. The rebar lap on the stirrups shall be 1”–2” min. to tie to the other U bar. The Subcontractor is allowed to place the rebar next to the conduit wall in all cases for the duct bank sections shown on sheet U-21. The function of the hoop bars is to hold the horizontal/longitudinal bars in place while the concrete is being placed.</p> <p>The duct bank shown in the drawings, U-5 and U-6, for the east-west run is a horizontal (Detail 8, Sheet U-21). This duct bank should be a vertical (see Detail 5, Sheet U-21). The duct banks will enter the hand holes HH-YDG-FO-175 and HH-SFE-FO-176 vertically, from the east and west as shown in Detail 5, Sheet U-21, and exit to the south from both hand holes in the horizontal position as shown in Detail 8, Sheet U-21.</p>																		
94R2	<p>The Subcontractor shall maintain at least 2” of cover between the rebar and the edge of the concrete on the sides and top of the duct bank and at least 3” of cover between the rebar and the bottom of the duct bank. The rebar lap on the stirrups shall be 1”–2” min. to tie to the other U bar. The Subcontractor is allowed to place the rebar next to the conduit wall in all cases for the duct bank sections shown on sheet U-21. The function of the hoop bars is to hold the horizontal/longitudinal bars in place while the concrete is being placed.</p> <p>The duct bank shown in the drawings, U-5 and U-6, for the east-west run is a horizontal (Detail 8, Sheet U-21). This duct bank should be a vertical (see Detail 5, Sheet U-21). The duct banks will enter the hand holes HH-YDG-FO-175 and HH-SFE-FO-176 vertically, from the east and west as shown in Detail 5, Sheet U-21 and exit to the south from both hand holes in the horizontal position as shown in Detail 8, Sheet U-21.</p>																		
95	<p>The use of a stability of 34 versus the 37 stability specified is approved. The proposed mix has been used on the INEEL on several other projects this year and has proven to be a good mix.</p>																		
96	<p>There is a discrepancy on the Level Control table and on the sewage lift station, Section N of sheet U-26. It is understood that the Subcontractor is installing a 15-foot fiberglass basin as shown on the plans. Therefore the level control elevations should be modified as follows:</p> <table><tr><td></td><td><b>Elevation</b></td><td><b>Distance from Base – Ft</b></td></tr><tr><td>Low-Level Alarm</td><td>4904.0</td><td>0.5</td></tr><tr><td>Pumps Off</td><td>4904.3</td><td>0.8</td></tr><tr><td>First Pump On</td><td>4908.9</td><td>5.4</td></tr><tr><td>Both Pumps On</td><td>4909.4</td><td>5.9</td></tr><tr><td>High-Level Alarm</td><td>4909.9</td><td>6.4</td></tr></table> <p>Bottom of Base Elevation = 4903.5</p> <p>Additionally, on the Lift Station, Section N, sheet U-26, both the 8” and 4” Inlet Inv. El. should be changed to 4909.84 to match the profiles on sheets U-3 and U-13.</p> <p>On the profile on Sheet U-3, the bottom of the sewer lift station, should be extended to 4903.5.</p>		<b>Elevation</b>	<b>Distance from Base – Ft</b>	Low-Level Alarm	4904.0	0.5	Pumps Off	4904.3	0.8	First Pump On	4908.9	5.4	Both Pumps On	4909.4	5.9	High-Level Alarm	4909.9	6.4
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97	<p>Realign the utilities on U-6 10 ft further south to avoid conflict with the Service Waste Valves and connection point. In addition, move the tie-in point of the potable water to the south as shown on the attached sketch. This will require the removal of a section of casing around the FRP pipe. After the connection is made, the connection shall be cast in concrete per detail 32 on Drawing U-25. Repair the encasement with concrete.</p> <p>See FCN 69 for cathodic protection requirements.</p>																		
98	<p>1. Change the text in Sect. 02732, page 2 of 9 line 21, and 8 of 9 line 40 to allow pneumatic testing of the secondary containment piping.</p> <p>2. Change Sect. 02733 to allow the Subcontractor to pneumatically test the secondary containment piping on the SW lines.</p> <p>3. The test pressure for this secondary containment piping for the SW lines = 4 psi (Design – 3.64 psi).</p> <p>4. Per Sect. 02732 and 02733, the Subcontractor is still required to submit a written test procedure.</p>																		
99	<p>Clow or Kennedy are acceptable valves.</p>																		
100	<p>Subcontractor is allowed to use 1” concrete expansion anchors in lieu of 1 1/8” anchors as shown on CN 91, sketch FCN 65R1.</p>																		
101	<p>Subcontractor is allowed to use SDR 11 and/or SDR 17. At the connection, a flange adaptor will be used as to make “like” welds, SDR-17 to SDR 17 and SDR-11 to SDR 11.</p>																		
102	<p>Core drill a new hole in the lift station to accommodate the 10-inch containment pipe and Kor-n-Seal boot. Set the elevation of the 6-inch carrier pipe into the lift station at elevation 4917.85. Patch the hole in the existing lower hole lift station with non-shrink grout.</p>																		
103	<p>Run FW line beyond the Sewer line to the north to allow for placement of thrust block and to lengthen the FW line to the south, out of the way of the SW line, to place thrust block. Ensure that as-built surveys of the utilities are performed and documented as required.</p>																		
104	<p>On Dwg. U-5 the thrust block for Fire Hydrant #7097 will interfere with piping systems. Use mega-lug fittings to secure fire hydrant #7097.</p>																		
105	<p>Subcontractor is allowed to use drainage fittings on the 4” sanitary sewer to the administration trailer as listed below. Subcontractor is to provide guard posts to protect cleanout as outlined in CN 66.</p> <p>1. 4" combo</p> <p>2. 4" 1/8 bend</p> <p>3. 4"1/4 bend</p> <p>4. 4" Fernco coupling</p> <p>All listed above will be ABS. HDPE piping tested to 150 psig, ABS to be tested to 2'-0" head pressure.</p>																		

CN #	
106	<p>Per contract specifications in Addendum #1 item #22. It calls out for the Subcontractor to maintain an 18" separation of the CW and the utility/process pipelines.</p> <p><b><u>Dwg U-2</u></b> - 18 inch separation does not apply</p> <p><b><u>Dwg U-3</u></b> - 18-inch separation does not apply. However, the north/south 4” CW should be encased in concrete to provide a 10’ clearance to the sewer riser pipe. Where pipes cross there should be 3–6 inches minimum clearance. Pipe should not rest on pipe that is crossed.</p> <p><b><u>Dwg U-4</u></b> - 18-inch separation does not apply except the north/south 4” CW must be encased in concrete over the SW, RW, and FW as shown on the plans.</p> <p><b><u>Dwg U-5</u></b> - 18-inch separation does not apply, except the north/south 4” CW must be encased in concrete over the SW, RW, and FW as shown on the plans. See Dwg U-4.</p> <p><b><u>Dwg U-6</u></b> - 18-inch separation does not apply, except the 2” WQ must be encased over the CW line as shown on the plans, and the 4” CW must be encased as shown on the plans. Also, the 4” CW must be constructed as shown on the profile 1 ft above the RW. One foot of horizontal clearance is also required.</p> <p><b><u>Dwg U-13</u></b> - 18-inch separation does not apply. The 2”- CW must be encased in 6-inch HDPE. Approval was given to place the 6” encasement 4.5–5.0 ft from the RW. The 2”-CW and encasement must be 10 ft from the 4”-WQ pipeline.</p> <p><b><u>Dwg U-14</u></b> - 18-inch separation does not apply. The 2” CW must be encased at the locations shown on the plans.</p> <p><b><u>Dwg U-18</u></b> - 18-inch separation does not apply.</p> <p><b><u>Dwg U-19</u></b> - 18-inch separation does not apply. The 2” CW must be encased at the location shown on the plans. See Dwg U-14</p>
107	Use ABS drainage fitting in lieu of the HDPE 90 degree elbow fitting, ensuring that waste will not back up. Refer to CN #66. Ensure that as-built surveys of the utilities are performed and documented as required.
108	Subcontractor may install a 2" threaded SST nipple to outside of concrete manhole with 2" SST union. Subcontractor may install 2-6" flange adapters to containment and make up union, then slide the 6" containment back and make-up flange. Ensure that as-built surveys of the utilities are performed and documented as required.
108R1	<p>CN 108 was unilaterally executed to the Subcontractor for \$0.00, on 3.24.03 and is incorporated into Change Order 005.</p> <p>Discussions between the Subcontractor and BBWI Project Management were held on 4.20.04. BBWI Project Management has agreed to issue CN 108R1 for costs associated with work scope described in CN 108.</p>
109	For the Subcontractor’s convenience, the Subcontractor may use (SDR 17) SCLAIR piping with associated SDR 17 fittings, in lieu of SDR 21 for the 12" drain and 18" containment HDPE pipe. Ensure all fittings are the same SDR. Refer to Spec. 02732.
110	The Subcontractor is allowed to replace knock-in bridging with strap bracing. The manufacturer of the steel building concurs with this change. Top and bottom straps shall be crossed at peak and eaves. (See attached memo from USA Buildings – Sept 24, 2002).
111	<p>Provision is being made to provide voice paging in the Administration Building and the Decon Building. The planned duct bank going into both buildings shown as detail 9 on Drawing U-21 is not large enough to accommodate the voice paging cable service.</p> <ol style="list-style-type: none"> <li>1. Remove all references to a 2" Carlon Type C multi-guard raceway. (Ref U-21 detail 9 and 12). The reference should only be for 2” power conduit.</li> <li>2. Drawing 520022 U-14 change duct bank out of HH-YDJ-FO-181 into Decon Building from the currently shown detail 9 U-21 to detail 8 U-21. In addition, add a note to apply to the interface between the duct and the HH. The note to say "Grout any gaps between HH-YDJ-FO-181 and 2 × 1 communication duct".</li> <li>3. Drawing 520021 U-13 change duct bank out of HH-YDJ-FO-180 into Admin building from the currently shown detail 9 U-21 to detail 8 U-21. In addition, add a note to apply to the interface between the duct and the HH. The note to say "Grout any gaps between HH-YDJ-FO-180 and 2 × 1 communication duct".</li> </ol>
112	The S/C is allowed to counter-bore the SDR 11 anchor to match the wall thickness of the SDR 17 pipe so that the anchor can be butt-fused to the pipe.
113	The S/C is responsible for chlorination of the water line. At no additional cost, the S/C will be allowed to install an HDPE tee to connect to the Chlorine Injection system. After the CW line has been chlorinated, use a blind flange to close the tee connection. Paint any metallic parts with black mastic.
114	Sterilization of the raw water piping is not required. Sterilization of the potable water piping is required.
115	<p>3” conduit is adequate; the area of the conductors to be pulled is 2.744. The 3” conduit has an overall area of 7.298. 40% of the conduit area is 2.9072. The runs are long but they are relatively straight and there is a pull point in the run. If the sub wants to provide 4” conduit at no cost for ease of installation, that would be acceptable.</p> <p>Substitution of type EB conduit is acceptable.</p> <p>The plan E-14 indicates a 4”; the panel schedule was not changed. The conduits installed should be 4”.</p> <p>The ground should be left at a #2/0.</p> <p>The attached drawings show the new alignment from Sub 2 with a double feed and sectionalizing switch.</p>
116	The 3” style 511 Ductile Iron coupling is acceptable for the FRP potable water pipe and the Ductile Iron raw water pipe. The restraint on the north/south portion of the RW and CW pipes currently exist. A thrust block will be placed on the RW Tee to provide the restraint in an east/west direction. The CW tee will be cast in concrete as shown in detail 32 on Drawing U-25 to provide restraint in the east/west direction.

CN #	
117	<p>Allow Subcontractor to use eight 1” Anchor bolts. Anchor bolts shall be spaced as shown on the flange on the trench wall for the contaminated equipment storage pad. See FCN 65 Rev 2 Sketch.</p> <p>Use 12” Long Thread Carbon Steel Kwik Bolt II as manufactured by Hilti (Item No 00045416 Catalog Pg 8 of 30). Embed bolt min of 4.5 inches. Verify back-up ring thickness of 1.34 inches and flange thickness on HDPE pipe as 1.8” to provide adequate threads. Place washer between nut and backup ring if required. Paint back-up ring and bolts with black mastic after installation.</p> <p>As an option, use a 1-inch “J” bolt for anchorage. The bolts shall be fabricated using 1” hot rolled ASTM A-36 stock. The bolts shall be 12” in length with a 4” Leg (total 16”-17”) To form the bend use a 1” radius bend. The bolts shall be embedded a minimum of 4 – 4.5 inches. Threaded length shall be 5 inches. (Verify thickness of HDPE flange and backup ring prior to fabrication.) Place washer between nut and backup ring if required. Paint back-up ring and bolts with black mastic after installation. A known fabricator of these bolts is American Fabricators in Idaho Falls at 522-1361.</p> <p>Spacing of rebar may be adjusted slightly to avoid conflict with the anchor bolts or “J” bolts.</p>
117R1	<p>1. Allow S/C to grout 16 - 1/2-inch all-thread rods 4-inches into the east P-trap wall. This is to anchor the 18-inch HDPE flange and backup ring to the wall. The all thread shall be cut flush with the nuts. The anchorage shall then be covered with geotextile fabric and a HDPE boot.</p> <p>2. Allow Subcontractor to use eight 1” anchor bolts to anchor the 18” pipe to the trench. Anchor bolts shall be spaced as shown on the flange on the trench wall for the contaminated equipment storage pad. See FCN 65 Rev 2 Sketch.</p> <p>Allow use of 10” Long Thread Carbon Steel Kwik Bolt II as manufacture red by Hilti (Catalog Pg 8 of 30). Embed bolt min of 4.5 inches. Verify backup ring thickness of 1.34 inches and flange thickness on HDPE pipe as 1.8” to provide adequate threads. Place washer between nut and backup ring if required. Paint back-up ring and bolts with black mastic paint after installation.</p> <p>As an option use a 1-inch “J” bolt for anchorage. The bolts shall be fabricated using 1” hot rolled ASTM A-36 stock. The bolts shall be 10” in length with a 4” leg (total 15-16”). To form the bend use a 1” radius bend. The bolts shall be embedded a minimum of 4–4.5 inches. Threaded length shall be 5-inches. (Verify thickness of HDPE flange and backup ring prior to fabrication) Place washer between nut and backup ring if required. Paint back-up ring and bolts with black mastic paint after installation. A known fabricator of these bolts is American Fabricators in Idaho Falls at 522-1361.</p> <p>Spacing of rebar may be adjusted slightly to avoid conflict with the anchor bolts or “J” bolts.</p>
118	The Subcontractor is allowed to perform in-service testing on tie-in points and associated joints for fire, raw, and potable water lines.
119	Due to the depth of the existing conduit and the lead-time for the 90-degree elbow fittings, OCI suggested moving the alignment of the communications duct bank as shown on the attached sketch. BBWI will allow this change. Reference Drawing U-6.
120	The METALUX 9 CELL, 2' × 4' parabolic recessed lights are no longer available. The Subcontractor is authorized to use METALUX 12 CELL, 2' × 4' Parabolic recessed lights in lieu of the discontinued 9 cell.
121	<p>Section 5.4 of Specification SPC-1484 states:</p> <p>The electrical systems in the AOT shall be in accordance with the following provisions:</p> <p>Incoming Service: A 480Y/277 Volt, 3 Phase, 60 Hz electrical service is available. The specification is correct. A transformer is required to convert this service to the 208Y/120V to supply the AOT with power. The S/C is to furnish and install a transformer in the electrical room in the AOT and to be compatible with the electrical equipment in the room. The transformer may also be installed on a pad outside the building that is near the electrical room and avoids conflict with other facilities. Furnish vendor data for the transformer for review and approval.</p>
122	<p>Decon Bldg:</p> <p>Relocate the mechanical grills on Drawings A-10 and HV-2 to avoid conflicts with lighting and to place the mechanical grills in the correct location. This will enable the S/C to comply with Specification 13911 in the layout of the fire-suppression system. See attached sketches 1 and 2 of FCN 110 for the revisions.</p>
123	On 10/14/02 and 10/15/02, three Atlas Mechanical employees required Lockout/Tagout training for the tie-in of the potable and raw water lines inside INTEC. Per Contract item No. 7.5.7., the Subcontractor is to be reimbursed for training costs. The contract price shall be increased to include training costs associated with SFP #115.
124	Per Specification 15480 2 of 3 line 22 (Drain all chlorinated water to the service waste drain system), BBWI will allow the Subcontractor to delete the requirement to dispose of the chlorinated water into the service waste water system. The water can be drained on the ground pending concentrations do not exceed 500 ppm of chlorine additive.
125	<p>Specification Section 13911, page 3, line 44 requires the use of high temperature heads in the treatment and decontamination areas of the building. Page 2, line 23 requires the use of 212 degree temperature-rated heads in the treatment and decontamination areas (212 degree heads are intermediate temperature heads).</p> <p>Use intermediate range sprinkler head for the Decon and Treatment Area. Replace the word “high” with “intermediate” on Line 44 of Section 13911, page 3 of 11.</p>
126	The 10-ft by 10-ft transformer foundation has a Neenah Type grating around the perimeter to cover the storage trench. The trench angle frame to support the grating is 4 ft too short to encompass the trench perimeter. OCI’s supplier shipped the grating for the transformer pad per CN 48R1, not per CN 48R2. To continue with the transformer pad, BBWI will allow the Subcontractor to place two 6-inch spaces in the outside perimeter of the framework on each side of the transformer trench. The concrete foundation and the available framework shall be placed to accommodate the grating and present a neat and uniform placement.
127	<p>The liner is shown as extending under the administrative and personnel section of the Decon Building. This area is not a contaminated area and the liner is not required under here. Engineering document DCN 8 will add a concrete wall around this area for the liner to attach to, and the liner will only extend under the decon bay and treatment area. Any leaks that may come from the restrooms or mechanical rooms are not required to be contained.</p> <p>Reference Drawings U-20 and S-2. These drawings have been modified to show the deletion of the geotextile and the admin area of the Decon Building and are listed as sketches #1 and #2.</p> <p>Reference Spec # 03300 Cast-in-Place Concrete and Spec # 02598 Secondary Containment Liner System. The liner will be attached to a new grade beam wall which shall be constructed of reinforced Class 40 concrete as detailed on Sketch #1.</p> <p>OCI is to submit to BBWI a cost estimate for this proposed work prior to proceeding.</p>

CN #	
127R1	<p>The liner is shown as extending under the administrative and personnel section of the Decon Building. This area is not a contaminated area and the liner is not required under here. Engineering document DCN 8 will add a concrete wall around this area for the liner to attach to, and the liner will only extend under the decon bay and treatment area. Any leaks that may come from the restrooms or mechanical rooms are not required to be contained.</p> <p>Reference Drawings U-20 and S-2. These drawings have been modified to show the deletion of the geotextile and the admin area of the Decon Building and are listed as sketches #1 and #2.</p> <p>Reference Spec # 03300 Cast-in-Place Concrete and Spec # 02598 Secondary Containment Liner System. The liner will be attached to a new grade beam wall which shall be constructed of reinforced Class 40 concrete as detailed on sketch #1.</p> <p>OCI is to submit to BBWI a cost estimate for this proposed work prior to proceeding.</p> <p>See sketch #1 rev 1 with dimensional clarifications.</p>
128	<p>For the S/C convenience, BBWI will allow the S/C to propose an (Or Equal Change) for the equipment supplied by the metal locker and bench manufacturer, List Industries, Inc. The equipment in question is located on VDS Item #64.)</p> <p>Colors still need to be submitted for selection in the VDS. Refer to Spec. Sect. 10500.</p>
129	<p>The "shop drawing" Vendor Data submittal for the Metal Building System does not need to show welds and similar fabrication details. These types of details are only needed on USA's internal detailed fabrication drawings/instructions. Safety significance of structure does not require this level of inspection rigor.</p> <p>Replace the words "completely detailing" of Specification 13120-3, line 39 with the word "showing."</p> <p>Delete lines 36–46 of Specification Section 13120 and replace with the following:</p> <p>Contractor Supplied Testing:</p> <p>The Contractor's Representative will inspect field-installed, high-strength bolted connections. He shall also perform high strength bolt tests and prepare test reports unless noted otherwise. The Contractor's Representative will perform visual inspection of all field welds in accordance with the requirements of Section 6 of AWS D1.1 as applicable.</p> <p>Contractor Inspection: Surveillance will be performed by the Contractor's Representative to verify compliance of the work to the drawing and specifications.</p> <p>Subcontractor Supplied Testing:</p> <p>Shop Bolted Connections: Inspect in accordance with the Specification for Structural Joints Using ASTM A325 or A490 bolts.</p> <p>Shop Welding: The Subcontractor will be responsible to certify welders, inspect and test during fabrication of structural steel per AWS D1.1 Record types and locations of defects and work required and performed to correct deficiencies. As a minimum, visually inspect all welds per Section 6 of AWS D1.1 as applicable.</p>
130	The SSSTF raw water line requires the replacement of the removed thrust block at the SSSTF/ICDF project boundary. This thrust block will enable (OCI / 3D Fire) to hydro test the line on the SSSTF project.
131	Specification 15801, page 5 of 7 line 31, calls out for "All ductwork welding shall be in accordance with Section 15016 of this specification. Specification 15016 is required to perform this work – see attached Spec.
131R1	<p>Specification 15801, page 5 of 7 line 31, calls out for "All ductwork welding shall be in accordance with Section 15016 of this specification. Specification 15016 is required to perform this work – see attached Spec.</p> <p>Note: Previously attached Spec. 15016 has been revised, constituting a Rev. 1.</p>
132	<p>Testing of the secondary containment line for the SW line is required to be a pneumatic test per FCN 93. It is not practical to test certain joints on the secondary 2” × 6” SW line per FCN 93.</p> <p>Allow use of a vacuum box to test the ICDF tie-in joint and the flanged fitting on the 2” × 6” SW line from the lift station to the ICDF Evaporation Pond. The test shall be performed per TPR-4976, Leak Test Procedure, using the Bubble Test-Vacuum Box Technique. This is equivalent to performing an initial service test (which is an acceptable alternative to pressure testing for ASME B31.3 Category D fluid systems). Design pressure for the system is 3.64 psi with normal operation pressure at atmospheric. The differential pressure achieved while performing the vacuum box test will be at least 2 psi.</p>
133	<p><u>AOT Conditions:</u></p> <p>In SFP 136, three of six existing conditions were answered as a clarification by BBWI. The remaining unanswered questions are listed below.</p> <p>1. (OCI) Sewer piping could not be placed under trailer during transport due to damage. This piping will be placed after setup.</p> <p>(BBWI) As long as the insulation on the foundation panels is in accordance with the specs and all gaps between the foundation and the trailer are insulated, no additional insulation around the sewer pipes is required. Although not questioned, the water pipe must be placed in the insulation envelope and a heat tape provided where it comes into the building to avoid freezing.</p> <p>2. (OCI) Due to ADA requirements, cabinets could not have been installed in restrooms.</p> <p>(BBWI) A clear space under each sink for a wheel chair use is acceptable. The sink should be placed in a finished and properly braced counter top.</p> <p>3. (OCI) The trailer was manufactured and shipped with ABS piping instead of PVC. Trailer manufacturer requests the use of ABS for sewer lines be accepted in lieu of PVC.</p> <p>(BBWI) The use of ABS pipe for sewer lines in place of PVC is acceptable.</p>

CN #	
133R1	<p><u>AOT Conditions:</u></p> <p>In SFP 136, three of six existing conditions were answered as a clarification by BBWI. The remaining unanswered questions are listed below.</p> <ol style="list-style-type: none"> <li>(OCI) Sewer piping could not be placed under trailer during transport due to damage. This piping will be placed after setup. (BBWI) As long as the insulation on the foundation panels is in accordance with the specs and all gaps between the foundation and the trailer are insulated, no additional insulation around the sewer pipes is required. Although not questioned, the water pipe must be placed in the insulation envelope and heat tape provided in the crawl space to avoid freezing.</li> <li>(OCI) Due to ADA requirements, cabinets could not have been installed in restrooms. (BBWI) A clear space under each sink for a wheel chair use is acceptable.</li> <li>(OCI) The trailer was manufactured and shipped with ABS piping instead of PVC. Trailer manufacturer requests the use of ABS for sewer lines be accepted in lieu of PVC. (BBWI) The use of ABS pipe for sewer lines in place of PVC is acceptable.</li> </ol> <p>This Change Notice (CN 133R1) takes precedence over the previous CN 133, and henceforth cancels CN 133.</p>
134	<p><u>AOT Conditions:</u></p> <p>In SFP 136, three of six existing conditions were answered as a clarification by BBWI. The remaining unanswered questions are listed below.</p> <ol style="list-style-type: none"> <li>(OCI) Sewer piping could not be placed under trailer during transport due to damage. This piping will be placed after setup. (BBWI) As long as the insulation on the foundation panels is in accordance with the specs and all gaps between the foundation and the trailer are insulated, no additional insulation around the sewer pipes is required. Although not questioned, the water pipe must be placed in the insulation envelope and heat tape provided in the crawl space to avoid freezing.</li> <li>(OCI) Due to ADA requirements cabinets could not have been installed in restrooms. (BBWI) A clear space under each sink for a wheel chair use is acceptable.</li> <li>(OCI) The trailer was manufactured and shipped with ABS piping instead of PVC. Trailer manufacturer requests the use of ABS for sewer lines be accepted in lieu of PVC. (BBWI) The use of ABS pipe for sewer lines in place of PVC is acceptable.</li> </ol> <p>This Change Notice (CN 133R1) takes precedence over the previous CN 133, and henceforth cancels CN 133.</p>
135	<p>A flow test was performed of the INTEC firewater system on August 1, 2002. One of the tests was performed on the loop that supplies the SSSTF project. The static pressure was 158 psi. Residual pressure was 102 psi with 3,010 gpm flowing. The flow hydrants were HYD-UTI-1525 and HYD-UTI-1074. The test hydrant was HYD-UTI-1524.</p> <p>Because this flow information is taken from the loop that the SSSTF ties into, this information may be used to proceed with the hydraulic design with a 10% safety factor.</p> <p>Actual waterflow information shall be provided on the as-built drawings and as-built design calculations.</p>
136	<ol style="list-style-type: none"> <li>On Drawing 516686 (this is one of the new drawings for the alarms into high level waste control room), zone B6 cable connection to UJY-YDJ-65-TS2: terminal 1 has no connection, wire colors on remaining terminals as follows: 2-green, 3-white, 4-orange, 5-blue, 6-red, 7-brown, 8-black. Justification: Determined in testing.</li> <li>On Drawing 520087 zone C5 change CP-YDJ-943 to CP-YDJ-963. Justification: To be consistent between IN series drawings.</li> <li>On Drawing 520087 zone B3 change CP-YDJ-901 to CP-YDJ-701. Justification: To be consistent with 520062, 520069 and 520072.</li> <li>On Drawing 520088 zone B7 and C7 and B5 change CP-YDJ-943 to CP-YDJ-963. Justification: To be consistent between IN series drawings.</li> <li>On Drawing 520088 zone C6 change PLC-YDJ-63 to PLC-YDJ-963. Justification: To be consistent with naming practice of other ICDF Complex PLCs.</li> </ol>

CN #	
136 (cont.)	<p>6. On Drawing 520089 zone D7, D6, D5, D4 change -YDG- to -YDJ- (6 places), as in PDT-YDG-10 to PDT-YDJ-10. Justification: To be consistent between IN series drawings.</p> <p>7. On Drawing 520090 zone C7 change PLC-YDJ-63 to PLC-YDJ-963. Justification: To be consistent with naming practice of other ICDF Complex PLCs.</p> <p>8. On Drawing 520091 zone D5 change PLC-YDJ-63 to PLC-YDJ-963. Justification: To be consistent with naming practice of other ICDF Complex PLCs.</p> <p>9. On Drawing 520091 zone B8 change CP-YDJ-901 to CP-YDJ-701. Justification: To be consistent with 520062, 520069 and 520072.</p> <p>10. On Drawing 520091 zone B8 move location heading labeled LIFTING STATION PUMP CONTROL above "SEE NOTE 3." Justification: This relay should be indicated in CP-YDJ-701.</p> <p>11. On Drawing 520091 NOTE 5 change CP-YDJ-901 to CP-YDJ-701. Justification: To be consistent with 520062, 520069 and 520072.</p> <p>12. On Drawing 520092 zone D5 change PLC-YDJ-63 to PLC-YDJ-963. Justification: To be consistent with naming practice of other ICDF Complex PLCs.</p> <p>13. On Drawing 520093 zone D5 change PLC-YDJ-63 to PLC-YDJ-963. Justification: To be consistent with naming practice of other ICDF Complex PLCs.</p> <p>14. On Drawing 520031 D8 add "LE-YDJ-203" next to "ULTRASONIC LEVEL CONTROL." Justification: To provide name to unnamed instrument.</p> <p>15. On Drawing 520034 C5 add "for LE-YDJ-201" after "ULTRASONIC LEVEL CONTROL." Justification: To provide name to unnamed instrument.</p> <p>16. On Drawing 520072 C6 add "for LE-YDJ-203" after "LEVEL CONTROL CABLES." Justification: To provide name to unnamed instrument.</p> <p>17. On Drawing 520072 C3 add "LE-YDJ-201" next to "LEVEL CONTROL CABLES." Justification: To provide name to unnamed instrument.</p> <p>18. On Drawing 520072 A2 add "7. SEE 520091 FOR CONNECTION OF 14 AWG CONDUCTORS." Justification: To provide note reference.</p>
137	<p><u>The following work will be required to install the AOT transformer:</u></p> <p>Install a new 90-ampere circuit breaker in panel PCC-B21-49.</p> <p>Leave the existing 50-ampere breaker in the panel PCC-B21-49 and label as a spare.</p> <p>Procure a pre-cast transformer slab with the minimum dimensions of no less than 4' × 4' × 4", from AMCOR. The slab shall be reinforced with #4 rebar at 12" on center each way. The slab shall have 4-ton lifting anchors on each corner. The concrete shall be 4000-psi minimum. A vendor data submittal is not required.</p> <p>The pre-cast concrete slab for the transformer shall be located on the northeast corner of the AOT to avoid conflict with the buried conduit. Slab to be located approximately 3 ft east of the east wall and in line with the north wall. Level the ground and compact the surface for the slab. Minor field adjustments may be made to accommodate the installation.</p> <p>Install a 100-Ampere fused disconnect switch on the exterior of the AOT. The 3 fuses will be rated at 90 Amperes. The disconnect switch shall be located near the transformer to match the routing of the conduit.</p> <p>Extend the existing conduit from panel PCC-B21-49 to the disconnect switch and install the conductors. The #4 AWG conductors originally specified will be adequate.</p> <p>Route a 1.25-inch RGS conduit with 3 #4 AWG and 1 #6AWG grounding conductor from the disconnect switch to the primary side of the transformer.</p> <p>From the secondary side of the transformer, route a 2" RGS with 4#3/0 AWG and 1#4 AWG grounding conductor to the AOT service entrance point.</p> <p>Drive a 3/4" × 10 ' ground rod at one corner of the transformer pad, route the ground conductor from the duct bank to the ground rod, connect the ground conductor and the ground rod to the neutral point of the secondary of the transformer.</p> <p>After completing the installation, place pit-run gravel around the slab and grade away from the building to present a neat a uniform appearance.</p>

CN #	
138	<p>Currently the temporary power for the ICDF Complex consists of three 50 KVA 480 V transformers providing approximately 200 amps of power. This power is supplied to the ICDF Complex through two 100 amp disconnects. The ICDF crest pad buildings will require the entire service from one of these disconnects – up to 100 amps. Temporary power is supplied to the SSSTF through the remaining disconnect for service to the S/C for construction needs. Wheeler electric has stated that OCI will not draw more than 40 amps @480V for construction purposes.</p> <p>Based on discussions with Gary Makey and John Duggan, the AOT will not require more than 60 amps at 480 V of temporary power for SO testing. The S/C shall supply up to 60 amps of temporary power to the AOT. The power will be run through the disconnect and transformer at the AOT.</p> <p>Additionally, the following numbers have been reserved for the AOT disconnect and transformer, respectively: DSW-YDJ-54 XFR-YDJ-54.</p>
139	<p>S-3 of the project drawings (middle detail) showing the P-trap and the drain (sump) shows the drain (sump) width (inside dimension) to be 4’-0”. CN #38 addresses the need to change the grating size to meet H20 wheel loads, but does not address whether or not the drain (sump) walls are to be moved accordingly. The sump dimensions will change to 2’ 3” wide by 4’-0” long (inside to inside dimensions). The 4’-0” dimension shall be oriented in a north/south direction perpendicular to the pipe. This means that the sump walls on two sides will be moved in to accommodate the revised grating width of 2’-6”. (The grating is slightly wider than the inside dimensions of the sump, such that it spans the sump and bears on the grating frame installed in the slab around the top of the opening).</p> <p>Provide a cost estimate prior to performing this work.</p>
140	<p>Drawing U-13 shows the HH-YDJ-FO-180 handhole at El. 4921.80. Sketch 1 shows truckscale El. at 4923.32. This will make the HH-180 18" lower than the truck scale. The elevations are inconsistent and the HH needs to be raised to the appropriate elevation.</p> <p>The top of the handhole is at elevation 4922.22. The elevation of the edge of the concrete ramp sloping off the scale is 4923.19. It is recommended that the handhole be raised 1.00 ft (12”) to make the top of the handhole even with the ramp. This can be done with a prefabricated concrete collar to set on top of the handhole. The existing lid would then be placed on top of the collar. The outside dimensions of the collar will be 3'6" × 3'0". The inside dimensions of the collar will be the same as those shown on Detail 15 on Drawing U-22. The height of the collar will be 1.00 ft. Seal the joint between the collar and the manhole with a bitumastic seal.</p> <p>Raising the grade will also prevent drainage water from going into the handhole.</p> <p>Provide a cost proposal prior to performing this work.</p>
141	<p>Currently, switch PSS-YDJ-220, will require some additional checking and testing prior to turnover to OCI. Further investigation into the switch has determined that a factory test and certificate is required prior to installation and connection.</p> <p>If the existing sectionalizing switch is not ready for connection when the cables and transformer are installed and are to be energized, the following temporary installation will be made:</p> <p>Remove the switch from the pad, and place on the blacktop in the vicinity of Substation 2 or other acceptable surface as directed by construction management.</p> <p>Furnish and install two (2) 36” × 36” × 12” NEMA 3R enclosures, join the boxes with a short 4” nipple and install over the existing conduits. Secure the boxes to the pad using mounting foot kits available from the box manufacturer. One conduit is from the north bus (B58) in Substation 2 and the second conduit goes to the new transformer.</p> <p>Install the 3 #2 15 kV cables from the north bus of Substation 2 to the new transformer through the boxes without splicing. Bond the boxes to the grounding conductor in the conduits.</p> <p>Provide cost proposal prior to performing this work.</p>
141R1	<p>This Change Notice (CN 141R1) cancels CN 141. In addition, the activities below are to be completed.</p> <p>The electrical Subcontractor shall remove the GFE S&amp;C PMH Sectionalizing Switch (PSS-YDJ-220) from the pad and move it to an INTEC facility (inside the fence) as directed by the Contractor.</p> <p>The Subcontractor shall modify the existing concrete pad per the attached sketch and associated notes.</p> <p>The electrical Subcontractor shall furnish and install a new S&amp;C PME-10 Sectionalizing Switch with 24” base extension compartmented to match enclosure. In place of the high voltage terminations required for the GFE S&amp;C PMH switch, the electrical Subcontractor shall furnish and install load break elbows for all terminations in the PME Switch.</p> <p>The electrical subcontractor shall furnish to the Contractor all Vendor Data and Factory Warranty Data associated with the Sectionalizing Switch prior to installation.</p> <p>The electrical subcontractor shall perform testing on the Sectionalizing Switch in accordance with FCN 125.</p>
142	<p>The new duct bank going into Substation #2 is higher than the gravel surface adjacent to the Sub 2 Building (B21-620). The new duct bank must be covered with pit-run gravel to avoid a conflict in the gravel surface in the parking area.</p> <p>Remove non-gravel/soil material out of the area east of the building and in the parking area, which may cause mud spots during adverse weather. Remove any new soil material placed next to the building recently and slope away from the building.</p> <p>Backfill the duct bank with clean pit-run gravel. Place a minimum of 12 inches of clean pit-run gravel over the duct-bank and slope away from the duct bank 10 ft toward the building and 12–15 ft east of the duct bank into the parking area. Slope the north and south areas away from the duct bank to natural ground. Grade so that any drainage will go to the south. Grade so that no drainage will go into the electrical manhole east of the building. Compact gravel in accordance with Section 02200 of the specifications. Compaction within 2 ft of the building is not required. Extreme care shall be used to avoid damage to the building or siding on the building. Reshape the area to present a neat and uniform appearance.</p> <p>Provide cost proposal prior to performing work.</p>



CN #	
143	<p>Due to changes in method of trench wall support, a modified rebar shape is needed to improve wall stability. Use vertical bars bent into a “z” shape 30” × 8” × 18” for walls west of the trench. The lower leg (18”) of the “z” would extend through the construction joint and into the trench wall a minimum of 12”. These bars are to be placed on 1’-0” centers approximately midway in either wall thickness.</p> <p>Provide temporary bracing in trench during construction to prevent lateral movement at top of trench walls. Prior to backfilling around contaminated equipment pad walls, locate five (5) equally spaced Neenah R-4999-JX, Type A grating sections along the length of the trench. Drill and tap into grating frame at recessed bolt locations and install ASTM A36 or ASTM A307 steel hex head bolt (size as recommended by the manufacturer), length as required to fully engage frame. In addition, fill any annular space between these five grating sections and each side of frame with a 100% solids epoxy grout for exterior applications having 5000 psi compressive strength minimum. Proceed with backfilling operations after 24-hour grout curing time.</p> <p>Provide a cost estimate prior to performing this work.</p>
144	<p>1. The submittals required per CN# 131, new Specification Section 15016, shall be submitted as vendor data. A list of these submittals is attached. The SSSTF VDS will be updated to include these submittals and submitted to the S/C. (Reference SFP 139).</p> <p>2. Specification 15016-8 of 8 line 7 and 8 states that stainless steel ductwork shall be tested in accordance with the requirements of SMACNA HVAC Duct Leakage Test Manual. The stainless steel ductwork shall be leak tested at the given duct pressure classification with no detectable leakage. (Reference SFP 147).</p> <p>3. A discrepancy exists on Drawing HV-1 identifying the restroom exhaust system as Carbon Steel (CS). Specification 15801-3 of 7 lines 37–41 identifies GS &amp; SST duct materials but no CS materials. The restroom exhaust system is to be a low pressure galvanized (GS) ductwork system not (CS) carbon steel. The callout on Drawing HV-1 should be (GS) galvanized steel not (CS) carbon steel. (Reference SFP 149.)</p> <p>Provide a cost estimate prior to performing this work.</p>
145	<p>In order to support partial transfer of portions of the Administrative Office Trailer, BBWI safety requires a set of steps for egress through the south walk door. BBWI requests OCI to load and transport a pre-constructed set of steps, and place in a workable configuration in front of the south walk door of the AOT. Some handrail alterations may be required for the steps to function properly. Any loose or unstable members on the steps will need to be fastened and secured.</p> <p>Construction Management will direct OCI to the appropriate set of steps to be used.</p>
146	<p>This Change Notice is prepared in response to SFP 145 #3 and SFP 148. The S/C has stated that this change will be at no cost.</p> <p>Change the installation of the liner under the two trenches in the Decon Building, as described below. This will aide to eliminate damage to the liner that occurred during the P-trap installation. The change will allow the liner to drain to the low point at the P-trap and sump in the treatment bay.</p> <p>Modify the installation of the liner, liner components and sand layer as shown on the attached sketches #1-4. OCI must coordinate with the lining Subcontractor to make sure that these changes will accommodate proper drainage from the liner extremities to the 18” drainpipe under the drain sump. In addition, care must be taken to avoid low spots in the liner, which would preclude proper drainage to the drainpipe. Some adjustment to the existing liner currently installed on the P-trap will be required. Advise the Subcontractors Technical Representative (STR) of changes which will be made.</p> <p>The installation of the liner shall also be installed to provide drainage from the floor extremities to the 18-inch secondary containment pipe under the 2’3” × 58’ drain sump in the Decontamination Bay. Joints in liner under the trenches shall be located and made watertight by Subcontractor in accordance with specifications.</p> <p>The placement and compaction of the subgrade under the liner and the sand on top of the liner shall be done in accordance with the plans and specifications. Care shall be taken to avoid damage to the liner.</p>
147	<p>Due to the depth of panel PCC-B21-49, the contractor had to install both ducts with 2-4" and 2-2" rather than as shown on Drawing E14 detail AV showing two ductbanks one with 4-4" and one with 4-2" conduits. See Attached Dwg. Configuration change does not effect the functionality of the ductbank and is acceptable.</p>
148	<p>Due to CN 48 changing the power from overhead to underground the vendor data schedule needs to be changed to eliminate vendor data items 106, 107, 188, and 189. All of these items are dealing with the pole hardware and equipment. Work to install permanent overhead power as described in the construction drawings and specifications will not be performed. Delete items 106, 107, 188 and 189 from the VDS schedule.</p>
149	<p>The stub road (Bamboo Street) is no longer required to be paved and tied into Sequoia Street. I have received permission from the INTEC landlord representative (Dennis Norwood) that paving Bamboo Street is no longer necessary. CN #90 was issued to OCI to allow Desert Sage to perform work in a temporary storage area next to Sequoia Street inside INTEC. BBWI requires reimbursement for the non-placement of asphalt in this area. The amount of asphalt removed by Desert Sage from Bamboo Street is approximately 10’ × 45’ × 3”.</p> <p>(Reference CN #90.)</p>
150	<p>After excavations and backfill for utilities was completed inside INTEC, a stockpile of backfill material remained. BBWI personnel surveyed the stockpile and recorded the information. The size of the stockpile is approximately 496 cubic yards. BBWI requires reimbursement for the Subcontractor not having to remove the stockpile. Reference EARTHWORK 02200-4 of 7 lines 24–28. See attached documentation for quantities.</p>
151	<p>DSC has incurred additional training costs since last CN for project training (CN #44). This training is for Rad I-II training, orange card updates, ordinance training, etc.</p> <p>Per Contract item No. 7.5.7, Subcontractor to be reimbursed for training costs associated with SFP No. 146.</p>

CN #	
152	<p>Existing Conditions:</p> <p>PRD-5010 requires the creation of weld maps for all welding. Specification Section 15016 restates the requirement for the Subcontractor to submit weld maps for all duct welding.</p> <p>Specification Section 15016 and the referenced welding code (AWS D9.1) require shop drawings for welded ductwork.</p> <p>Specification Section 15016 requires visual weld inspections to be performed by the Subcontractor for both on-site and off-site welds.</p> <p>Reason for change:</p> <p>The Subcontractor has stated that the weld maps required by Specification 15016 are additional work.</p> <p>The shop drawings submitted thus far by the Subcontractor do not meet the requirements for shop drawings as detailed in Specification Section 01300. However, they do meet the requirements of Specification Section 15016 for shop drawings, and are consistent with the requirements for weld maps required in PRD-5010.</p> <p>The Contractor has a qualified weld inspector available to perform visual weld inspections at the Subcontractor's shop and in the field.</p> <p>Disposition:</p> <p>Weld maps required, as part of the weld record package by PRD-5010 in the original contract shall be submitted.</p> <p>Shop drawings for duct welding need only comply with the requirements of Specification Section 15016. The Contractor will also accept these drawings as the weld maps required by PRD-5010 provided that they give traceability to weld location for the weld numbers specified on the weld history records. The requirement for shop drawings stated in Specification Section 15016 is intended to meet the welding code only, and the requirements of Specification Section 01300 will be exempted for these shop drawings.</p> <p>The Contractor will perform all visual weld inspections, both onsite and offsite.</p>
152R1	<p>CN 152 was unilaterally executed to the Subcontractor for \$0.00, on 3.24.03. and is incorporated into Change Order 005.</p> <p>Discussions between the Subcontractor and BBWI Project Management were held on 4.20.04. BBWI Project Management has agreed to issue CN 152R1 for costs associated with work scope described in CN 152.</p>
153	<p>The requirements in Specification 1485 Section 16123 (including vendor data items) for the testing of the 12 single-mode fiber optic cables, do not apply. The Contractor will perform testing (in accordance with their established procedures/instructions), and submit test verification reports to the project file for the 12 single-mode fiber. If testing shows a problem with the fiber between the splicing points, the S/C shall be responsible for repairing or replacing the fiber as necessary per the specifications.</p>
154	<p>Masonry walls shown on Dwg. A-1, A-9, A-5 Section C are not all dimensionly located (position / length).</p> <p>A clarification on certain CUM wall dimensions for the constructability of the walls.</p> <p>3" exterior metal wall panels and 6" girt with 5/8" gyp. Board interior finish is required as shown on the existing drawings (Dwg A-5, Section C). Clarification of detail is shown in this revision. This will require the shelf in the men's and women's shower room to be shortened slightly.</p> <p>Additional clarification notes were added.</p> <p>A callout was added describing the grout seal around the girts.</p> <p>See attached sketch FCN 3R1</p>
155	<p>NCR 30191 was written because the S/C installed 3" laterals instead of 4" laterals in the men and women's restrooms in the Decon Building. The referenced laterals can be 3 inch. The capacity of the laterals shall be re-verified if additional fixture units (not shown on Dwg. 520052) are added to the laterals.</p> <p>Two (2) cleanouts on Dwg. 520052 P-1 appear to be shown as installed against direction of flow for cleaning access. Cleanouts actually installed are in direction of flow of waste. Installed condition is in accordance with UPC paragraph 707.6. The installed condition of the two cleanouts is acceptable.</p> <p>Dwg. 520052, P-1 shows floor drain at eastern end of sewer system connecting into 4" sewer main. S/C has connected this floor drain to the 3" branch line which runs to the women's locker room. This floor drain is included in item 3 for drainage fixture unit values. The connection is not at the location shown on the contract drawing but appears to meet UPC requirements. Connection of the floor drain to the 3" branch line running from the women's locker room is acceptable.</p> <p>Dwg. 520052, P-1 shows 4" vent through roof. The S/C installed a 3" stub up from the 4" main. The 3" size is adequate for 84 units per UPC table 7-5. Maximum number of units served by this vent appears to be 66 per table 7-3 of UPC. A 3" vent is acceptable.</p>
156	<p>The hinges on the BILCO door are 11.11/16" deep and the concrete collar around the lift station is not deep enough to accommodate the door and the hinges. The slab needs to be constructed deeper to accommodate the door. The slab and the door need to run parallel with the pump location to accommodate future removal of the pumps.</p> <p>S/C shall reorient the concrete slab around the lift station so that the BILCO door is parallel with the pumps. This is necessary so the pumps can be easily removed for maintenance. The slab should be lengthened to 7 ft to accommodate the door.</p> <p>Construct the slab as shown on attached sketches.</p>

CN #	
157	<p>Place two strips of Hydrotite (by Greenstreak) sealer around the vertical HDPE Pipe prior to casting the concrete floor in the two trenches. (One in the decon bay and one in the treatment bay.) Cast a 1/2” wide by 1/2” deep V-groove slot in the walls and the floor of the trenches. After stripping the forms, fill the slots with a non-sag sealer such as Sika Flex 15 LM or General Polymer’s (Sherwin Williams) Corseal PS. In addition, place a 1/2” bead around the pipe and concrete interface. Make sure the pipe and concrete are clean prior to placing the sealer.</p> <p>Place two similar joints on the walls and the floor of the east trench in the decon bay. Joints shall be south of the pipe located between 3 equal spaces.</p> <p>See attached sketch 1 of 1</p> <p>Reference Dwg. S-3</p>
158	<p>On Tuesday November 12, Desert Sage Contractors were stopped from working on Birch Street due to INTEC facility excavation issues. DSC was redirected by their Superintendent to work outside INTEC on the SSSTF project following the stop work. This CN is being issued to compensate the S/C for down time prior to the redirection of work by DSC.</p>
159	<p>Dwgs. E-1, E-5, IN-1,E-4.</p> <p>Existing Conditions:</p> <ol style="list-style-type: none"> <li>1. The drawings referenced above do not show installation of the local disconnect switches for EF-YDJ-3 and EF-YDJ-4</li> <li>2. Subcontractor cannot install the electrical equipment in the electrical room per print E-4, E-5 and IN-1. Panel PCC-YDJ-300 has increased in size and there is not sufficient room for transformer XFR-YDJ-312 on the west wall of the electrical room as shown on Drawing E-4.</li> <li>3. Drawing U-14 shows installation of a 1" conduit and a 2" in the ductbank from PCC-YDJ-300. Drawing E-5 shows two 1" conduit feeding blowers.</li> <li>4. Due to the extent of the sweeps of 4" conduit and multi-cell raceway, the Subcontractor cannot place the 4" conduits at the locations shown in the electrical room.</li> </ol> <p>Reason for change:</p> <p>Fused safety switches are required for these exhaust fans.</p> <p>The configuration of the equipment in the electrical room must be modified to fit all of the required components into the room.</p> <p>A discrepancy exists between the drawings that needs to be corrected.</p> <p>Because the sweeps of the 4” conduit will not fit above the other ductbank in this room, the Subcontractor requests to terminate 4" encased pipe inside the building line and run eight - 1" conduits to appropriate locations near the phone board.</p> <p>Disposition:</p> <p>Provide and install two 30A fused safety switches with a NEMA 3R enclosure. Provide fuses sized for motor running protection. Mount the switches on or adjacent to the exhaust fans.</p> <p>Move the transformer from the west wall of the electrical room to the north wall. Reroute conduit and wire to accommodate this change.</p> <p>Provide two 1” conduits for the exhaust fans.</p> <p>Allow the S/C to terminate the 4” conduit and ductbank inside the building and run eight – 1” PVC conduits to the appropriate location near the phone board with rigid elbows. Ensure that the elbows in the 1” conduits meet or exceed the minimum bend radius of the 25 pair of telephone cable per the cable manufacturer’s recommendations and the minimum bend radius of the fiber manufacturer for the multimode fiber (per the CH2M Hill Design – the allowable bend radius is 6 inches for the multimode fiber). Additionally, the S/C shall ensure that the location of the eight conduits is coordinated with location of the tendons in the concrete slab.</p>
160	<p>Currently, a written plan of slab construction is required per the specification. The intent of asking for this submittal was to receive one cohesive submittal that could serve as a comprehensive plan (for approval) and also a basis or agenda for the pre-construction meeting eventually held on March 11, 2003.</p> <p>Subcontractor states that:</p> <ol style="list-style-type: none"> <li>1. A submittal entitled “written plan of slab construction” was submitted and received a “D” disposition.</li> <li>2. The critical information required in the written plan of slab construction has been or will be submitted in various other Vendor Data submittals that have received or will eventually receive approval.</li> </ol> <p>Delete specification requirement to submit a separate “written plan of slab construction” Vendor Data Item. Subcontractor is responsible for providing a slab that meets all requirements of the specifications and final design drawings and also specifically accepts any responsibility associated with deleting this submittal requirement.</p>
161	<p>The specified Bilco Door for the P-trap in the Decontamination Building has a 7.5-inch frame. There is approximately 5 inches from the top of the slab/Bilco door to the top of the P-trap wall.</p> <p>The Subcontractor is to make a notch approximately 2-ft long by 1.1/2” × 1.1/2”, in the two walls of the P-trap to accommodate the Bilco door. Ensure that the top of the Bilco Door matches the grade at the top of the slab. Care shall be taken to avoid overbreak of the concrete. Dry pack any uneven surfaces between the concrete and the Bilco Door Frame.</p> <p>Provide and install a 90-degree 1 1/2 inch drain coupling to drain the Bilco doorframe into the P-trap.</p>

CN #	
162	<p>Reference CN 70 SCADA Alarm Design.</p> <p>The current drawing shows the conductor for the ICDF TROUBLE ALARM 2 running into cabinet 5TB Section 1D terminal TB3-1,2.</p> <p>Terminal TB3-1,2 is the wrong terminal.</p> <p>ICDF TROUBLE ALARM 2 shall be in cabinet 5TB Section 1D terminal TB3-3, 4 not TB3-1, 2.</p> <p>Therefore, conductor currently on TB3-1 needs to be moved to <b>TB3-3</b> and conductor currently on TB3-2 needs to be moved to <b>TB3-4</b>.</p> <p>These terminals have fused 24 VDC on them.</p> <p>Reference DCN 4 DWG 516686.</p>
163	<p>Change notice 163 revises Quality Clause 722 Fabrication Release, to allow the S/C to fabricate and install the equipment embedment plates in the post-tensioned slab in support of the Soil Stabilization System installation. All other requirements of the Contract Documents remain in effect.</p> <p><b>NOTE:</b> Concrete placement is not permitted until the Mix Design is approved by BBWI per required Vendor Data submittal.</p>
164	<p>The PME-10 sectional switch that is available for installation has 600 amp bushings that require modular type connectors. This is the standard configuration for the PME style of switches.</p> <p>CN-141 installs a new sectional switch outside of Sub-2 for the cables coming from Sub-2 to the SSSTF project. As was noted on the dispositioned sectional switch submittal, 600 amp bushings are installed in the switch. These bushings are not compatible with the load break elbows. Provide and install the required 600 amp dead break connectors.</p>
165	<p>Reference SPC 1481 Sect 03300</p> <p>The specification currently requires the air content for concrete in the interior slab of the Decon Building to be maintained from 3.5 to 6.5 percent. Additionally, discharge of the concrete from the mixer is to be completed before the drum on the concrete truck has revolved 300 revolutions.</p> <p>Reason for Change:</p> <ol style="list-style-type: none"> <li>1. The S/C is requesting Mix Design 45F Mix No. 198 for post-tensioned slab air content range to be 2.5 to 7%. Cement to be increased to 625 lb. and fly ash to be decreased to 110 lb. Mix design is attached for your review.</li> <li>2. The 300 revolutions and the 1 1/2 hour time limit may be adjusted due to the intensive testing requirements required by BBWI. S/C may exceed the revolutions and time limits if consistency is maintained (concrete may be tested as needed to ensure mix design/specification are met.</li> </ol> <p>Design Engineering Disposition:</p> <ol style="list-style-type: none"> <li>1. For the Decontamination building interior slab, Sect. 03300-5, Lines 35–36 for ¾-inch maximum sized aggregate shall be changed to allow an air content ranging from 2.5 to 7 percent (Moderate exposure). The air content for the exterior slab shall remain at 4.5 to 7.5 percent.</li> <li>2. Sect. 03300 – 6, Lines 36–37. The sentence shall be revised to read: “The Contractor may extend the 1-1/2-hr limit or number of revolutions (300 revolutions) if the concrete still meets all specified requirements after 1-1/2 hrs or 300 revolutions.”</li> </ol>
166	<p>(Change Notice 166) revises Quality Clause 722 Fabrication Release, to allow the S/C to release for procurement the commercially available SSS Treatment Equipment. This equipment consists of the non-engineered/commercial grade items listed below:</p> <ol style="list-style-type: none"> <li>a) Besser Twin-Shaft Mixer</li> <li>b) Bulk Bag Unloader System</li> <li>c) Box Tipper</li> <li>d) Air Scavenger System (i.e., HEPA Filtration Unit, Cartridge Dust Collector, Blower Unit).</li> </ol> <p>All other requirements of the Contract Requirements/Documents remain in effect.</p>
167	<p>On Drawing A-7 in the Room Finish Schedule for Room 114 Women's T.R. vestibule, the ceiling is shown to be a hollow core ceiling to be painted. Hollow cores stop on east CMU wall in room 102. See Section F on Dwg. A-6. The ceiling in the Women’s vestibule area shall be a suspended acoustical tile ceiling for access to the area above the hollow core. The room finish schedule is incorrect.</p> <p>For the type of ceiling in the Room Finish Schedule for the Women’s T.R. Vestibule, delete the dot under Concrete H.C. Slab and place a dot under Susp. Acoustical Tile. Also delete the Remarks for this item.</p>
167R1	<p>Reference (Dwg. A-7, 520041) (Dwg. A-6, 520040) (Dwg. A-10, 520044)</p> <p>On Drawing A-7 in the Room Finish Schedule for Room 114 Women's T.R. vestibule, the ceiling is shown to be a hollow core ceiling to be painted. Hollow cores stop at the edge of room 102. See Section F on Dwg. A-6. The ceiling in the Women’s vestibule area shall be a suspended water board T.T.F. with epoxy ceiling as shown on DWG A-10. The room finish schedule is incorrect.</p> <p>For the type of ceiling in the Room Finish Schedule for the Women’s T.R. Vestibule, delete the dot under Concrete H.C. Slab and place a dot under Susp. Water board T.T.F. w/epoxy. Also delete the Remarks for this item.</p> <p>CN 167R1 takes precedence over, and cancels CN 167.</p>

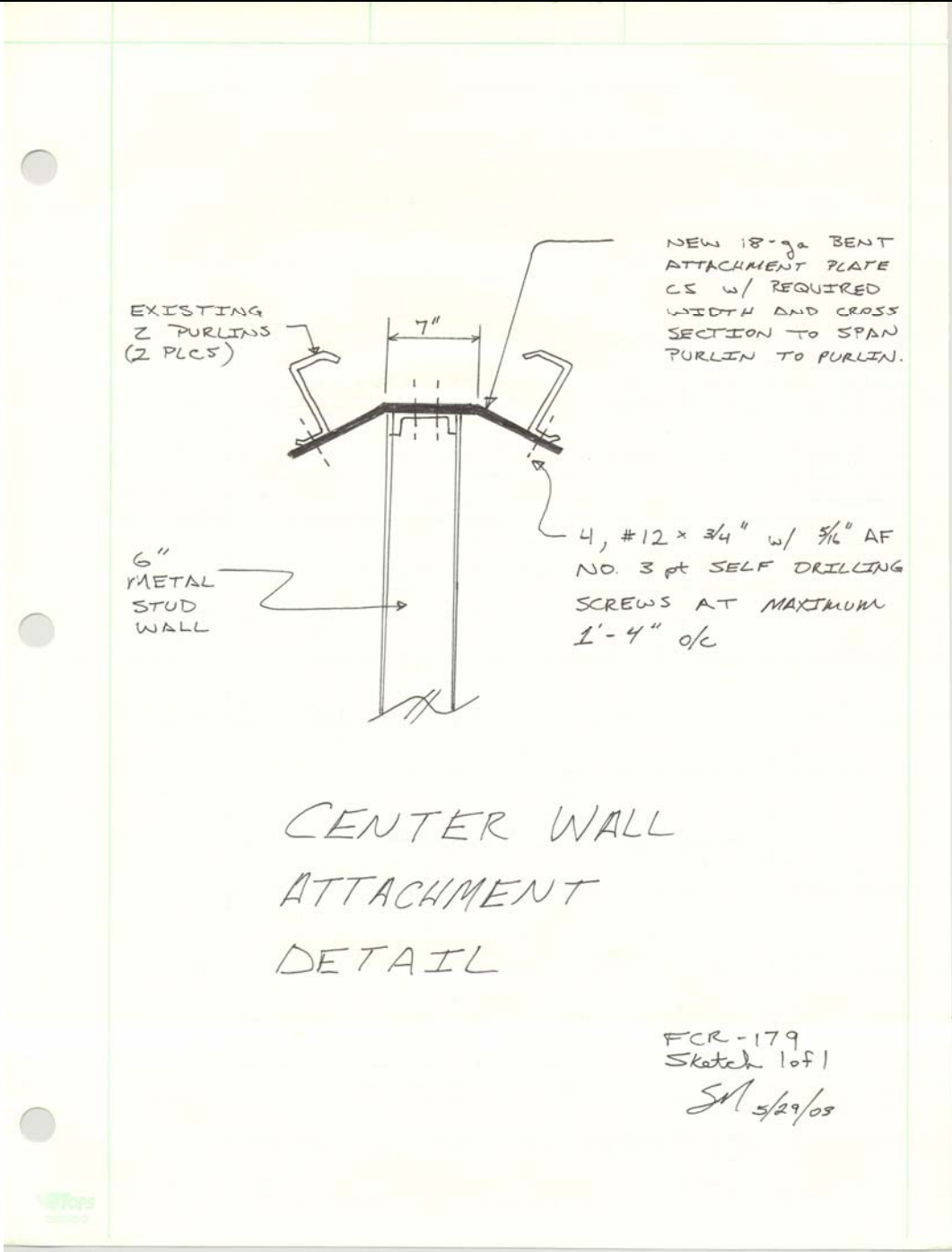
CN #	
168	<p>To meet Specification 16110 5 of 7 lines 33–37 and match opening for manhole 495, S/C had to purchase 16" ring extension. Currently the design drawings show the top of the manhole at 4923.7. The grade of the soil around the contaminated equipment storage pad and building is approximately 4925 in this area as shown in DCN #1 and Dwg U-14. Install a 16" ring extension on this manhole to raise to approximate elevation 4925.</p> <p>Additionally on Drawing U-14, the manhole is called out as MH-YDJ-EE-495. However, on Drawings U-17 and E-21, the same manhole is called out as MH-YDJ-EE-491. Change manhole label on Dwg U-17 and E-21 to MH-YDJ-EE-495.</p> <p>Provide cost estimate prior to performing this work.</p>
169	<p>Reference Section 08362, Insulated Sectional Overhead Door.</p> <p>Specifications call out for a single phase. The S/C requests to use a ¾ HP, 3-phase motor. This will require the change of a 2-pole breaker to a 3-pole breaker. There are enough spares in the panel for this to be allowed.</p> <p>Currently the specification, Section 08362-3 of 4, lines 34–38 requires the motor to be a high-starting, 208V 1-phase reversible, constant duty, Class A insulated electric motor with overload protection. Additionally, the motor must be an open-drip-proof motor and controller with a NEMA Type I enclosure.</p> <p>Vendor data was submitted to BBWI for the overhead doors for the Decon Building (VDS #71), comments came back from BBWI asking that the door supplier “mark up on shop drawings note for motor as a ¾ HP/3 phase”.</p> <p>Replacement of the single-phase motor with a 3-phase motor is acceptable as long as the NEC Code compliant wiring, circuit breaker, and over-current protection are provided. The motor shall meet all other requirements as described in the specification.</p> <p>The S/C shall be responsible for providing all materials and labor for the change at no additional cost to BBWI, and with no schedule impacts. The S/C shall be responsible for redlining the panel schedule, showing the breaker change on Dwg. E-8 (panel LP-YDJ-312).</p> <p>This change shall be negotiated prior to the starting of work described above.</p>
170	Per Contract item No. 7.5.7., Subcontractor to be reimbursed for training costs associated with SFP No. 171.
171	<p>Currently, the finish for the exterior contaminated equipment storage pad is required to be a trowel finish per SPC 03300-10 of 14 lines 30–32.</p> <p>On the newly placed concrete exterior contaminated equipment storage pad, apply a sweat finish and allow to cure a full 28 days. The S/C shall ensure that the concrete finish (i.e., surface profile) is compatible with the painting manufacturer’s recommendations. Do not apply a chemical cure for finishing this concrete.</p>
172	<p>Reference SSSTF Dwgs S-3</p> <p><u>Currently, CN 143 and FCN 132 Item #2 requires the following:</u></p> <p>Provide temporary bracing in trench during construction to prevent lateral movement at top of trench walls. Prior to backfilling around contaminated equipment pad walls, locate five (5) equally spaced Neenah R-4999-JX, Type A grating sections along the length of the trench. Drill and tap into grating frame at recessed bolt locations and install ½” ASTM A36 or ASTM A307 steel hex head bolt, length as required to fully engage frame. In addition, fill any annular space between these five grating sections and each side of frame with a 100% solids epoxy grout for exterior applications having 5000-psi compressive strength minimum. Proceed with backfilling operations after 24-hour grout curing time.</p> <p>Installing six of the concrete supports is more cost effective and will perform equally as well as installing the drilled and tapped grating as required per FCN 132.</p> <p>CN 172 deletes the need for the (5) additional Neenah grating sections called out in CN 143.</p> <p><u>The S/C is to proceed as described below:</u></p> <p>The S/C shall install a total of six (6) integral concrete trench wall support beams (6-in. wide by 8-in. deep) across the contaminated equipment storage pad trench. These trench wall support beams shall start with the beam closest to the south end of the trench and be spaced approximately every 16 ft (+ or - 2 ft.)</p> <p>Each support beam shall be reinforced with four (4) #5 bars (with a 90-degree bend). Each bar shall be approximately 2 ft 3 in. long with an approximate 1 ft tail. For each support beam splice together two sets of bars along long ends with the tails extending to the north and south, respectively. Place bars in the trench approximately 2 - 3 inches apart and approximately 3 inches below the top of each support beam.</p> <p>A gap of at least ¼ inch shall be maintained between the top of each support beam and the bottom of the grating.</p>
173	<p>Reference SSSTF Dwgs S-2.</p> <p>On Drawing S-2, Note 5 calls out for the use of two layers of welded wire fabric to be used for reinforcement of the ramps.</p> <p>Due to the fact the welded wire fabric is difficult to keep in place within the ramp pour, the S/C requests to use one mat of #4 bar @ 12" centers. Also, since the Subcontractor will not be placing the slab and ramp monolithically, S/C requests to install approximately 50 U-shaped bars into underlying slab pour in ramp areas to provide improved mechanical anchorage. This method will provide a means to tie the two pours together.</p> <p><u>The S/C is to proceed as described below:</u></p> <p>It is the S/C’s responsibility to ensure that the welded wire fabric is placed per the specifications and the notes and that it does not settle to the bottom of the concrete during the pour. However, at no additional cost or schedule impact, the S/C may use one mat of #4 bar @12” centers placed in the center of the ramp areas in lieu of two mats of welded wire fabric.</p> <p>Additionally, the S/C shall install the 8” × 20” × 8” U-shaped bars (approximately 50) into the slab during the pour to assist in anchoring the slab and ramps together. The S/C shall ensure that the tops of the U-shaped bars are covered by 1” minimum concrete when placing the ramps.</p>

CN #	
174	<p>Reference Teton Pre-stress Shop Drawings.</p> <ol style="list-style-type: none"> <li>1. An overlap of hollow core panels is needed to maintain fire rating for rooms 101 and 102. This will change shop drawings submitted by Teton Pre-Stress. Currently the shop drawings do not indicate that the panels need to cantilever over the USA supplied W section support. The S/C shall provide hollow core panels of proper length and overall shape as shown in the submittal from G&amp;S to accommodate the final steel support design supporting the hollow core.</li> <li>2. There is not sufficient support for hollow core panel at the corner column. Edge support required for the hollow core panel at the column was not shown on USA’s original metal building shop drawing submittal, but should have been, per call out on Section K of subcontract Drawing A-6. The S/C shall provide edge support of panel at column as shown on supplemental submittal drawing from USA, provided with SFP 170.</li> <li>3. The S/C shall redline the shop drawings and submit as-builts reflecting these changes. A re-submittal of the vendor data is not required.</li> </ol>
175	<p>Currently the door locations for doors 14, 15, and 17 as shown in the construction drawings and associated building shop drawings are in conflict with the general arrangement drawings for the treatment equipment. Due to the size and location of the SSS equipment and the restricted size in the treatment room (112) the two roll up doors shown (door 15 and 17) shall be relocated between column lines 3 and 4 to provide adequate access to the equipment for personnel and equipment (forklift access). Additionally, (man door 14) shall be adjusted to allow personnel access.</p> <p>Inner door (door 17) shall be located approximately 1 foot north of (man door 13). (Man door 13) is in the steel stud wall and will not affect the building structure steel. (Door 15) shall be relocated. Install north jamb (2 foot 9 inches) south of column line 4 (as shown on USA sketch previously submitted with SFP 172). Relocate (man door 14) approximately 3 feet north of the existing location to allow better personnel access between the bulk bag unloader and the mixer pressure washer.</p> <p>Moving of the two referenced doors shall require interior lighting, heaters, and water piping to be field routed. OCI has previously stated in SFP 172 that they have spoken to their door supplier and arranged clearance of new locations and have also spoken to 3-D Fire protection on routing of the interior pipe, which shall be a separate Vendor Data submittal.</p> <p>On Drawing S-2 the north ramp shall be extended to catch the new location of roll up (door 15). The new locations of the above-referenced doors are depicted on Besser’s General arrangement drawings.</p> <p><u>Additional changes:</u></p> <p><b>MECHANICAL</b> – (Drawing HV-2) Relocate heaters HTR-YDJ-12, HTR-YDJ-12, and HTR-YDJ-9 such that they are not above the new location of overhead doors 15 and 17 (when doors are in the open position).</p> <p><b>ELECTRICAL</b> – (Drawing E-5) Relocate the electrical disconnects for heaters HTR-YDJ-12, and HTR-YDJ-9 to accommodate the new location of heaters (HTR-YDJ-12, and HTR-YDJ-9). (Drawing E-6) Relocate the exit light fixture above (door 14) to accommodate the new location. (Drawing-6) Note 3 now applies to the light fixtures above the new location of (doors 15 and 17).</p> <p><b>LIFE SAFETY SYSTEMS</b> – (Drawing LSS-3) Move the MFA pull station (on west exterior wall of the treatment area) 3 feet to the north, next to the new location of (door 14).</p> <p><b>FIRE PROTECTION</b> – 3D Fire Protection shall modify the fire sprinkler piping on a separate Vendor Data submittal.</p>
175R1	<p>Currently the door locations for doors 14, 15, and 17 as shown in the construction drawings and associated building shop drawings are in conflict with the general arrangement drawings for the treatment equipment. Due to the size and location of the SSS equipment and the restricted size in the treatment room (112), the two roll up doors shown (door 15 and 17) shall be relocated between column lines 3 and 4 to provide adequate access to the equipment for personnel and equipment (forklift access). Additionally, (man door 14) shall be adjusted to allow personnel access.</p> <p>Inner door (door 17) shall be located approximately 1 foot north of (man door 13). (Man door 13) is in the steel stud wall and will not affect the building structure steel. (Door 15 ) shall be relocated. Install north jamb (2 foot 9 inches) south of column line 4 (as shown on USA sketch previously submitted with SFP 172). Relocate (man door 14) approximately 3 feet north of the existing location to allow better personnel access between the bulk bag unloader and the mixer pressure washer.</p> <p>Moving of the two referenced doors shall require interior lighting, heaters, and water piping to be field routed. OCI has previously stated in SFP 172 that they have spoken to their door supplier and arranged clearance of new locations and have also spoken to 3-D Fire Protection on routing of the interior pipe, which shall be a separate Vendor Data submittal.</p> <p>On Drawing S-2, the north ramp shall be extended to catch the new location of roll up (door 15). The new locations of the above referenced doors are depicted on Besser’s General arrangement drawings.</p> <p><u>Additional changes:</u></p> <p><b>MECHANICAL</b> – (Drawing HV-2) Relocate heaters HTR-YDJ-12, HTR-YDJ-12, and HTR-YDJ-9 such that they are not above the new location of overhead doors 15 and 17 (when doors are in the open position).</p> <p><b>ELECTRICAL</b> – (Drawing E-5) Relocate the electrical disconnects for heaters HTR-YDJ-12 and HTR-YDJ-9 to accommodate the new location of heaters (HTR-YDJ-12, and HTR-YDJ-9). (Drawing E-6) Relocate the exit light fixture above (door 14) to accommodate the new location. (Drawing-6) Note 3 now applies to the light fixtures above the new location of (doors 15 and 17).</p> <p><b>LIFE SAFETY SYSTEMS</b> – (Drawing LSS-3) Move the MFA pull station (on west exterior wall of the treatment area) 3 feet to the north, next to the new location of (door 14).</p> <p><b>FIRE PROTECTION</b> – 3D Fire Protection shall modify the fire sprinkler piping on a separate Vendor Data submittal.</p>
176	<p>CN 154 modified the location room to the north CMU walls in the Electrical Room and the Fire Riser Room. However, the locations of the access doors were not changed from the distances shown on the original Drawing A-1.</p> <p>The access doors in the electrical room and fire riser room are in conflict with the north-south CMU walls. The Subcontractor is to relocate these access doors one foot to the west. Additionally the Subcontractor will modify the electrical service supervision to the fire riser to accommodate the new door location in the Fire Riser Room. This will require a one-inch diameter supervision conduit to be cut off. Field route a new conduit from the duct bank to the fire riser. The Subcontractor is allowed to make the necessary framing and siding modifications to the south end wall as required to accommodate these changes.</p>
177	<p>Reference Drawing U-25 Detail G (Guard Post).</p> <p>Guard post detail shows the steel post filled half way with concrete. The S/C welded steel caps on the pipe bollard prior to arriving onsite.</p> <p>Construct the guard posts to the lines and dimensions as detailed on Drawing U-25 detail G. Cut the metal cap off of the post and fill the post full of concrete. The concrete shall be rounded 1 to 2 inches on top to provide for drainage off the post.</p> <p>Provide a cost estimate and negotiate this CN prior to performing the work described above.</p>

CN #	
178	<p>1. Drawing E-11 refers to the wiring methods required for the sewage lift station and the Decon lift station. Note 1, requires that an explosion-proof box be installed inside the containment and that cable sealing fittings are to be used. Note 2, requires that the conduits coming from the containment have seal-offs before they enter the control panel. Once the cables have been installed and the sealing compound installed, the cables will not be removable or replaceable. For maintenance purposes, it would be beneficial for the permanently installed pump cables to be terminated in an explosion-proof box outside the zone and the sealing fittings be installed after the explosion proof J-box. The S/C shall place the junction box outside the containment.</p> <p>2. Drawing E-11 shows two 2" conduits from the pump control panel to the containment. Install both of the pump cables in one 2" conduit. The level control system requires only one 1" conduit.</p>
179	<p>CN 154 sketch 1, note 2 calls out CMU walls to be grouted to the girts. The S/C has concerns with locking the girts into CMU walls with grout due to expansion and contraction of light steel.</p> <p>The S/C is allowed to butt the CMU walls to the inside edge of the girts, which run perpendicular to the outside edge of the building. Butt gypsum board to each side of the CMU walls, with a metal J trim edge. Provide a continuous line of caulk along the joint between the CMU walls and the gypsum board.</p> <p>Reference attached sketch depicted on FCN 161.</p>
180	<p>Reference specification 04220.</p> <p>Spec Section 04220 4 of 9, lines 41–43, identifies the requirement for loose-granular fill insulation. Delete lines 41–43 of spec Section 04220, page 7 of 9 loose granular fill insulation. The CMU cells will be grouted solid and the granular fill insulation is not required.</p> <p>Spec Section 04220 7 of 9, lines 33–35, identifies lap ends to be a minimum of 24 inches. Using 24-inch laps would make it impossible to keep joints uniform throughout the wall, and would create additional difficulties in placement of the blocks. Due to the fact that all of the walls are grouted solid, vertical, horizontal, and that rebar reinforcement is present, the joint reinforcement will not be the primary reinforcement. An 8-inch lap splice is adequate for primary reinforcement and is in accordance with the manufacturer’s recommendations. The S/C is allowed to make reinforcing splices at 8-inches. Vendor data has been supplied showing that this is an acceptable splice and meets the requirements for primary reinforcement.</p>
181	<p>Reference Spec. Sect. 13200.</p> <p>Specification 13200 requires the testing of the scales with 20,000 lb of state-certified weights. Per the truck scale manufacturer (Fairbanks Scales), normal testing of truck scales is done using 10,000 pounds of certified test weights. The truck scales tested on this project used 10,000 lbs of certified test weights. Another test to be conducted by the state will use higher test weights and if a problem is found with the scale, the truck scale technician will re-calibrate the scale at no charge, per SFP 181.</p> <p>The S/C is allowed to use 10,000 lb of certified test weights rather than the 20,000 lb specified.</p>
182	<p>Spec Section 16160 refers to the type of panels/equipment that are required but does not specify acceptable manufacturers. Equipment is identified on the drawings (E-8 and DCN 3 Sketch 11) as being Cutler/Hammer and Square D equipment.</p> <p>The Subcontractor, due to availability, desires to use Square D equipment. Subcontractor requests permission to use Sq. D equipment for all panels, LP-YDJ-312, PCC-YDJ-300, PCC-B21-49, and LP-YDJ-104, with no cost and no credit.</p> <p>Based on the review of the vendor data, the Square D equipment appears to be an “or equal” substitute for the Cutler Hammer equipment. The S/C is allowed to use Square D equipment for the listed panels.</p>
183	<p>On 5/6/03 force account personnel installing grounding rods for the SSSTF chain-link fence inadvertently penetrated the 12-inch fire water main, rupturing the Blue Brute pipe below. The rupture occurred between FWV-UTI-7105 and FWV-UTI-7093.</p> <p>S/C shall excavate around the ruptured firewater line to a sufficient depth and width in order to properly repair the pipeline. S/C shall perform a visual inspection, remove all damaged pipe, provide and install ductile iron fittings and new sleeve, as necessary to perform repairs. All materials and installation are to be in accordance with SPC-1485, Section 13505. If damage to Blue Brute pipe is such that an entire section(s) of pipe needs to be replaced then this will be acceptable. S/C shall flush the entire leg of the line once repair has been completed, per Specification 13505. S/C shall perform a hydrostatic test in accordance with Section 13505 of SPC-1485.</p> <p>Others will remove a sufficient amount of fence fabric in order for the S/C to safely perform the repair. S/C shall remove an adequate number of fence posts in order to repair the pipe. After repair and testing is complete S/C shall sand bed, backfill and compact backfill in accordance with specification 02200. The area shall be graded as required per contract drawings.</p>
183R1	<p>CN 183 states that the S/C is to perform a hydrostatic test in accordance with Section 13505 of SPC-1485. Further investigation has shown that NFPA allows for in-service testing for repairs.</p> <p>On 5/6/03 force account personnel installing grounding rods for the SSSTF chain-link fence inadvertently penetrated the 12-inch fire water main, rupturing the Blue Brute pipe below. The rupture occurred between FWV-UTI-7105 and FWV-UTI-7093.</p> <p>S/C shall excavate around the ruptured firewater line to a sufficient depth and width in order to properly repair the pipeline. S/C shall perform a visual inspection, remove all damaged pipe, provide and install ductile iron fittings and new sleeve, as necessary to perform repairs. All materials and installation are to be in accordance with SPC-1485, Section 13505. If damage to Blue Brute pipe is such that an entire section(s) of pipe needs to be replaced then this will be acceptable. S/C shall flush the entire leg of the line once repair has been completed, per Specification 13505. This water main has previously been tested and placed in service. The breakage occurred to an in-service main. In accordance with NFPA 13-2002, paragraph 16.2.1.6 allow the testing at the system working pressure if the section cannot be isolated. The sectional control valves are of the type that typically leaks and therefore the hydrostatic testing is not being imposed for this repair.</p> <p>Ensure at least one fire pump is running for in-service test. Revised submittal of vendor data schedule item 86 (Underground Fire Protection Certifications) for this repair is required.</p> <p>Others will remove a sufficient amount of fence fabric in order for the S/C to safely perform the repair. S/C shall remove an adequate number of fence posts in order to repair the pipe. After repair and testing is complete, S/C shall sand bed, backfill and compact backfill in accordance with specification 02200. The area shall be graded as required per contract drawings.</p> <p>CN 183R1 takes precedence over and cancels CN 183.</p>
184	<p>Reference Dwg 520035 and (CN 154, FCN 3R1 sketch 1 of 1).</p> <p>Currently there is a 2’ 8” space for access between the men’s restroom and shower/locker room. Change the size of the 4’ wall between the men’s restroom and shower/locker room to 3’ 4”. There will be no impact to design, function, or structure.</p>

CN #	
185	<p>Contract Specification 09900, Pg. 5/11, Lines 15–20, specifies the use of General Polymer products for coating of the Concrete Interior Treatment Area, Decon Bay Floor, RadCon Room and PPE Change Room. Per the manufacturer, these products have been discontinued and are no longer available. Subcontractor proposes to use an “Or Equal” product that will meet or exceed the required coverage for this area.</p> <p><b>(Elasti-Poxi Joint Fill) (Aqua-Rock Primer/Sealer) (Elasti-Poxi Membrane)</b> This information will be submitted through the Vendor data system.</p> <p>The proposed Rock Tred products are okay to use, provided the product is applied per manufacturer’s recommended instructions including, but not limited to the following:</p> <p>Either shot blast or acid etch the existing surfaces to remove all latence</p> <p>Apply Aqua-rock primer/sealer, brush apply at any saw-cuts or larger surface blemishes</p> <p>Apply Elasti-Poxi Joint Fill.</p> <p>Apply base cost of Elasti-Poxi Membrane (approximate coverage of 150 sf/gal).</p> <p>Apply topcoat of Elasti-Poxi Membrane, broadcast coarse alumina oxide and back roll.</p> <p>Overall thickness of finished application = 15 mils.</p>
186	<p>Per Spec Section 4220-7 of 9, lines 17–19 state "install bond beams where shown on the drawings." Drawings only show two walls with a bond beam (A-6). Per the UBC, as a referenced design code and industry standard, a bond beam is required at the top course of all masonry walls.</p> <p>A-6 Section F shows a 4" solid CMU to form the outside edge of the mezzanine. OCI suggests that the 4" solid CMU be deleted and the area be formed and cast into place with the 2" topping over the hollow core panels.</p> <p>The 4” solid CMU can be replaced by a formed, cast-in-place unit at the perimeter of the hollow core panels as suggested by the Subcontractor.</p>
187	<p>Reference Spec 05400 and Addendum 1 SSSTF Drawings #20.</p> <p>The metal stud gauge required for the north-to-south center wall, between the treatment area and the decon bay, and the east-to-west wall between the treatment area and PPE and RadCon rooms shall be 18 gauge. See attached detail for stabilizing the top track of the stud wall.</p>
188	<p>Section H on INEEL Drawing 520040 shows the 3-5/8” metal studs with a 32” o/c dimension. Also, gauge is not shown. Change the spacing on the ceiling studs on referenced drawing to 24” o/c in lieu of the 32” o/c noted on the drawing. Also, metal studs shall be 22-gauge minimum.</p>
188R1	<p>Section H on INEEL Drawing 520040 shows the 3-5/8” metal studs with a 32” o/c dimension. Also, gauge is not shown. Change the spacing on the ceiling studs on referenced drawing to 24” o/c in lieu of the 32” o/c noted on the drawing. Also, metal studs shall be 22-gauge minimum.</p> <p>Reflected Ceiling Plan on INEEL Drawing 520044 shows the 2 × 2 suspended gypsum board or water board ceiling, per the legend. This area shall not be 2 × 2 suspended gypsum board, but rather a solid sheetrock ceiling as per SPC-1485, Section 09250. Refer to A-7 for Room Finish Schedule. Sheetrock shall be painted as per SPC-1485 Section 09900.</p>
189	<p>Reference Dwg. 520038 and Spec. 1485 Section 5100, 9900.</p> <p>The north personnel door on the west side of the Decon Bldg does not have a typical concrete stoop beneath the awning. Without the stoop, the awning is slanted away from the bldg. Cut the four 8” × 8” base plates off of the four 2” schedule 40 pipe legs. Grind welds off of plates. S/C shall cut off the existing legs to the correct angle to match slope and height of ramp. Once all the legs are at the appropriate length and angle, fillet-weld the 3/16” base plates to each leg in accordance with (SPC-1485 Section 5100). Grind the pipe butt weld for uniform appearance and repaint as noted on Drawing 520038 and in accordance with (SPC-1485 Section 9900).</p> <p>The awning for the south personnel door on the west side of the Decon Bldg is too short, given the depth of the stoop. If installed at present elevation, the bottom edge of the awning roof structure would interfere with opening and closing of the door. S/C shall cut the four 8” × 8” base plates off of the four 2” schedule 40 pipe legs. Grind the plates flush, and clean the excess weld off of the 2” pipes. Fabricate four 2” schedule 40 carbon steel inserts at the required length, for correct installation height without interference with the door. Butt-weld the four insert pieces to the 2” schedule 40 pipe in accordance with (SPC-1485 Section 5100). Fillet weld 3/16” base plates to the insert piece in accordance with (SPC-1485 Section 5100). Grind pipe butt weld for uniform appearance. Repaint as noted on Drawing 520038 and in accordance with (SPC-1485 Section 9900).</p> <p>The stoops on the east-side wall of the Decon Bldg slope away from the building for drainage. The S/C shall provide and place a non-shrink grout dry pack under the east legs of the awnings to compensate for less than 1-inch slope on the concrete stoop. Anchor the legs through the grout into the concrete stoop.</p>
190	<p>Reference INEEL Drawing 520039, Section D, and SPC-1485, Section 5400.</p> <p>S/C is to provide and install a new 18-ga “bent attachment plate” to be primed as a minimum in accordance with SPC-1485, Section 9900. Length of each “bent attachment plate” section shall be determined by S/C, however coverage shall be provided along the entire length of the centerline stud wall, and section ends shall be butted together.</p> <p>See sketch 1 of 1 on following page for attachment detail.</p>



CN #	
190 (cont.)	 <p>EXISTING Z PURLINS (2 PLCS)</p> <p>NEW 18-ga BENT ATTACHMENT PLATE CS w/ REQUIRED WIDTH AND CROSS SECTION TO SPAN PURLIN TO PURLIN.</p> <p>7"</p> <p>6" METAL STUD WALL</p> <p>4, #12 x 3/4" w/ 5/16" AF NO. 3 pt SELF DRILLING SCREWS AT MAXIMUM 1'-4" o/c</p> <p>CENTER WALL ATTACHMENT DETAIL</p> <p>FCR-179 Sketch 1 of 1 SM 5/29/03</p>
191	<p>Reference INEEL SPC-1485, Section 2722 and Section 2732.</p> <p>Referenced specifications call for a GILX 200CD pump with 460 volts, 3-phase power needed. Update referenced sections of SPC-1485 to reflect approved vendor data, VDR-26798. The appropriate pump shall be an HPGLX-200 with the 2 HP, 460 volts, 3-phase, 60 Hertz, 3450-rpm ratings. The "CD" designation shall be changed to the "JD" designation to get the 460-volt configuration. The pump is the same for 230-Volt as the 460 Volt. The difference is the way the wiring is configured in the field to obtain the 460-Volt requirement.</p>

CN #	
192	<p>Specification Section 13911-7, Line 12 allows for Schedule 10 galvanized pipe, for 2-1/2" and larger pipe in office areas. 3-D Fire Protection misread this wording and has provided Schedule 10 galvanized piping for 2-1/2" and larger piping (i.e. cross mains) throughout the Decon Building. Specification requires Schedule 40, galvanized pipe that conforms to ASTM A-53 or A-795 for areas other than office areas.</p> <p>The technical specification called out a pipe that is in excess of the minimum requirements of NFPA 13-2002. The pipe that meets ASTM 795 and is schedule 10 is acceptable per NFPA 13, Table 6.3.1.1. The DOE-ID AE Standard 1390 calls for piping of greater than 2" Φ is allowed to be schedule 10 when the system is a wet pipe system. In this situation an air dryer has been designed into the system to keep the moisture from condensing inside the pipe and causing corrosion. The situation is acceptable.</p>
193	<p>Reference INEEL Drawing 520035, INEEL Drawing 520040, and SPC-1485, Section 3300.</p> <p>The referenced section does not define the concrete requirements for the 2" topping that is installed over the hollow core ceiling. Follow requirements of Specification 03300 for 4000 psi concrete. Consider topping to fall into the category of "other structural concrete" for slump limits.</p>
194	<p>Reference INEEL Drawing 520026, SPC-1485 Section 13505-2, and SFP 43 / FCN 45 / CN 35.</p> <p>CN #35 was issued to the Subcontractor which addressed the need to raise the grade around the Decon Building. There was not a requirement on this change notice to raise fire hydrant #7104. S/C shall provide and install adequate extension(s) for fire Hydrant #7104 in order to match the grade developed in CN #35. S/C shall meet SPC-1485, Section 13505-2, when performing this work.</p>
195	<p>Reference Section 2713 of SPC-1485.</p> <p>Section 2713 of SPC-1485 states that a Contractor's Material and Test Certificate for Underground Piping is a required submittal and VDS-18 was given as a submittal number. Sections 2722 and 2732 of SPC-1485 call out for the same certification; however, no VDS line item was assigned. Submittal numbers (VDS item 297 for Section 2722 and VDS item 298 for Section 2732) have been added to the required certification submittals.</p> <p>The vendor data schedule items 227 and 232 are currently required to be submitted for the "Fire Alarm Equipment, Test Procedure" and the "Telephone and Data (Inspection and Test Data)." Delete VDS items 227 and 232. In order to delete these submittal requirements from the VDS system, the S/C shall submit cover sheets referencing this CN. (Note: S/C will still be required to have a representative present during fire alarm testing.)</p>
195R1	<p>Reference Section 2713 of SPC-1485.</p> <p>Section 2713 of SPC-1485 states that a Contractor's Material and Test Certificate for Underground Piping is a required submittal and VDS-18 was given as a submittal number. Sections 2722 and 2732 of SPC-1485 call out for the same certification; however, no VDS line item was assigned. Submittal numbers (VDS item 297 for Section 2722 and VDS item 298 for Section 2732) have been added to the required certification submittals.</p> <p>The vendor data schedule items #227 and #232 are currently required to be submitted for the "Fire Alarm Equipment Test Procedure (#227)" and the "Telephone and Data (Inspection and Test #232)." Delete VDS item #232 (Telephone and Data inspection test). In order to delete this submittal requirement from the VDS system the S/C shall submit a cover sheet referencing this CN.</p> <p>NFPA 72 requires that the installer of the Fire alarm equipment provide a test procedure. As a convenience to the S/C, BBWI has attached a fire alarm test procedure for the S/C to use. S/C is still required to submit test procedure through the vendor data system, under VDS #227. The Subcontractor's NICET Level III qualified representative shall be responsible for conducting the Acceptance Test Procedure. BBWI Life Safety personnel will be present during the test.</p> <p>CN 195R1 takes precedence over, and deletes CN 195 in its entirety.</p>
195R2	<p>Reference Section 2713 of SPC-1485.</p> <p>Section 2713 of SPC-1485 states that a Contractor's Material and Test Certificate for Underground Piping is a required submittal and VDS-18 was given as a submittal number. Sections 2722 and 2732 of SPC-1485 call out for the same certification; however, no VDS line item was assigned. Submittal numbers ( VDS item 297 for Section 2722 and VDS item 298 for Section 2732) have been added to the required certification submittals.</p> <p>The vendor data schedule items #227 and #232 are currently required to be submitted for the "Fire Alarm Equipment Test Procedure (#227)" and the "Telephone and Data (Inspection and Test #232)." Delete VDS item #232 (Telephone and Data inspection test). In order to delete this submittal requirement from the VDS system the S/C shall submit a cover sheet referencing this CN.</p> <p>NFPA 72 requires that the installer of the Fire alarm equipment provide a test procedure. As a convenience to the S/C, BBWI has attached a fire alarm test procedure for the S/C to use. S/C is still required to submit test procedure through the vendor data system, under VDS #227. The Subcontractor's qualified representative shall be responsible for conducting the Acceptance Test Procedure. BBWI Life Safety personnel will be present during the test.</p> <p>CN 195R2 takes precedence over, and deletes CN 195R1 in its entirety.</p>
195R2 CMTC	<b>CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING</b> <b>-- DECONTAMINATION WATER AND PUMPING SYSTEM--</b>
195R2 CMTC	<b>CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING</b> <b>-- POTABLE AND RAW WATER --</b>
195R2 CMTC	<b>CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING</b> <b>-- SANITARY SEWER SYSTEM --</b>
196	<p>There is currently GFE equipment mounted on the north wall of the AOT Data Room that is not needed. This includes a power supply, surge suppressor, duplex receptacles, transceiver, and j-box. Only required equipment beyond the GFE cable and antenna is a base station radio. The wall-mounted GFE equipment is not required due to the base unit being a table-mounted system.</p> <p>BBWI will install the base station radio on a table in southeast corner of the Admin Bldg data room. The power supply, surge suppressor, duplex receptacles, transceiver, and j-box shown in View AK will not be installed. Accordingly, the S/C is to install the GFE antenna as shown on 520084 on the mast that is located on the NE corner of the AOT. Field route the coax from the antenna into the AOT. Once in the AOT, route the coax above the acoustical ceiling tiles from the NE corner of the AOT to the SE corner of the Data Room. Coax to be routed down wall cavity and place a receptacle box, typical for table-height use (Approximately 33" from floor to center of box).</p>

CN #	
197	<p>Reference INEEL Drawing 520038 – SPC-1485 Section 5100.</p> <p>S/C is unable to attach roofing material to the awnings located at the four personnel doors for the Decon Building.</p> <p>S/C shall weld 2” to 3” wide by 3/16” thick carbon steel bar to provide structure to screw roofing material to. Welding is to be performed in accordance with Section 5100 of SPC-1485. Material is to be in conformance with Section 5100 of SPC-1485. Field locate one bar at each eave and one bar on each side of the peak. Clean welds and paint to match existing awning structure.</p>
198	<p>Installation problems with the roof insulation and vapor barrier have arisen with the use of the Elaminator system. This installation was an approved alternative per CN 18. Several locations have experienced “blow off”. This is a condition where the upper side of the vapor barrier was not attached to the purlin correctly and, consequently, the vapor barrier and insulation hangs down exposing the insulation. Also, several insulation pieces were not installed correctly. Some of the insulation was installed up over the purlins and leaving some void space between the purlins.</p> <p>To correct the “blow off” conditions and insulation problems, the S/C has faxed to the Contractor an Owens Corning procedure for rework of these areas, proposed additional installation of lined insulation, and new steps to be taken to ensure the use of the Elaminator system will provide results that will meet specification requirements.</p> <p>Proposed repairs to the roof insulation and vapor barrier at the discrepant area described in NCR 31190 are acceptable. The Subcontractor shall perform the Owens Corning Blow-off Repair Procedure (see Attachment 1) and have Contractor’s QA verify repairs meet this repair procedure prior to the installation of the additional insulation. Once the repairs have been performed, add in the new insulation as described in e-mail description (see Attachment 2). The entire section of roofing that has been installed to date shall have this new insulation installed. This includes the area from the eave to the ridge and from the south edge of the building to a minimum of 14 feet from the south end wall. This added insulation and hat channel does not exceed the collateral load limit of 10 psf noted on USA installation drawings. (See Attachment 3) for the additional weight estimate from BC West. This repair to the discrepant area can be performed after the balance of the roof installation has been completed using the Elaminator system. The S/C shall follow corrective action steps to ensure continued installation will meet specification requirements with minimal rework required. These corrective action steps are (shown in Attachment 4). Contractor QA to ensure corrective action steps are being followed and installation meets specification requirements. The Owens Corning repair may be used for further “blow off” conditions only after it is determined by Contractor QA that the installation procedure and technique are not the root cause.</p>
198R1	<p>Installation problems with the roof insulation and vapor barrier have arisen with the use of the Elaminator system. This installation was an approved alternative per CN 18. Several locations have experienced “blow off”. This is a condition where the upper side of the vapor barrier was not attached to the purlin correctly and, consequently, the vapor barrier and insulation hangs down exposing the insulation. Also, several insulation pieces were not installed correctly. Some of the insulation was installed up over the purlins and leaving some void space between the purlins.</p> <p>To correct the “blow off” conditions and insulation problems, the S/C has faxed to the Contractor an Owens Corning procedure for rework of these areas, proposed additional installation of lined insulation, and new steps to be taken to ensure the use of the Elaminator system will provide results that will meet specification requirements.</p> <p>Proposed repairs to the roof insulation and vapor barrier at the discrepant area described in NCR 31190 are acceptable. The Subcontractor shall perform the Owens Corning Blow-off Repair Procedure (see Attachment 1) and have Contractor’s QA verify repairs meet this repair procedure prior to the installation of the additional insulation. Once the repairs have been performed, add in the new insulation as described in e-mail description (see Attachment 2). The entire section of roofing that has been installed to date shall have this new insulation installed. This includes the area from the eave to the ridge and from the south edge of the building to a minimum of 14 feet from the south end wall. This added insulation and hat channel does not exceed the collateral load limit of 10 psf noted on USA installation drawings. (See Attachment 3) for the additional weight estimate from BC West. This repair to the discrepant area can be performed after the balance of the roof installation has been completed using the Elaminator system. The S/C shall follow corrective action steps to ensure continued installation will meet specification requirements with minimal rework required. These corrective action steps are (shown in Attachment 4). Contractor QA to ensure corrective action steps are being followed and installation meets specification requirements. The Owens Corning repair may be used for further “blow off” conditions only after it is determined by Contractor QA that the installation procedure and technique are not the root cause.</p> <p>CN 198R1 Justification:</p> <p>Due to the Subcontractor’s lack of oversight and attention to work scope, a portion of the work associated with the second layer of insulation was not completed. Per the attached letter dated 6/10/03 from Mr. Shawn Hicks of Ovard Construction, bullet number three reads, “Tape off roll ends to existing facing to leave no fiberglass exposed to view.” Some of ends of the rolls are currently exposed. As a convenience to the Subcontractor, BBWI shall allow the ends of the fiberglass rolls to be left exposed. Per attached letter from BC West Inc. dated 9/9/03, the repair procedure has been revised.</p> <p>CN 198R1 contains all of the content stated in CN 198 with the exception of altering the repair plan described above. Henceforth, CN 198R1 takes precedence over and deletes CN 198.</p>
199	<p>Subcontractor’s air scavenger system will not function properly with the EF-YDJ-4 exhaust fan in operation.</p> <p>It is acceptable to delete LV-3/F-YDJ-3 and LV-4/F-YDJ-4 and replace LV-2/F-YDJ-3 with a higher flow louver with filter and heating unit to meet air scavenger flow requirements while maintaining required ambient temperatures. Addition of a filtered opening between the Decon Bay and the Treatment Area is acceptable.</p> <p>Install backdraft dampers in 18” diameter and 20” diameter exhaust ducts downstream of all branch take-offs and upstream of the building wall. Dampers shall be 18” × 18” and 20” × 20” Ruskin Model S2SS Stainless Steel Commercial Backdraft Dampers. Install transitions from round to square as required.</p> <p>Electrical Portion: Install a combination starter in place of the safety switch for fan EF-YDJ-4 and run a ¾” conduit with 5#12 (2 spare) conductors from the starter to the Motor Control Center furnished by the Treatment Equipment Supplier, see attached sketches.</p>

CN #	
199 Ltr.	<p>July 9, 2003</p> <p>To: Chris Duncan/ Mike Drake</p> <p>From: Shawn Hicks</p> <p>Re: CN 199 and SFP Clarification 207</p> <p>Dear, Chris and Mike</p> <p>This letter is written to address CN 199, SFP Clarification 207, and the telephone conversation between BBWI, Ovard Construction, Inc. (OCI), American Fabrication, Inc. (AFI), and Wheel-a-Brator. These documents and conversations were held to resolve the operation of the SSS Equipment Air Scavenger system and the existing HVAC system for the Decon Building.</p> <p>In the SFP Clarification 207 received by BBWI on 6/25/03, BBWI states that the S/C is responsible to provide a “complete and fully integrated design” and a “fully functional system”. OCI and AFI have supplied the SSS Equipment system as a fully functional and integrated design for the SSS Equipment. The procurement specification does not state that the S/C is responsible for re-design of the existing HVAC system for the Decon Building. BBWI has stated in the past that this system was placed into the Treatment to serve as the ventilation system for the SSS Equipment. The S/C, in their design elected not to use this system as it would not meet the ventilation requirements for the mixing equipment. In the procurement specification for the Air Scavenger system it is suggested by BBWI that the designer of the Air Scavenger MAY elect to use this system and that it is available; Wheel-a-brator elected to design their system independent of this provided system.</p> <p>In the telephone conversation with BBWI (Chris Duncan, Mark Pope, and Steve Moody), AFI (Brad Hendrickson), Wheel-a-Brator (Chris Boak), and OCI (Shawn Hicks) the following was discussed in regards to the existing HVAC design for the Decon Building and the Air Scavenger system provided by Wheel-a-Brator. It was determined by BBWI engineering that backdraft dampers are not needed for the 20” diameter duct system located in the treatment room per BBWI’s design of the existing system. BBWI does show a backdraft damper for the 18” diameter system for the remainder of the Decon Building. Chris Boak asked the question of why BBWI engineered a backdraft into the 18” diameter duct, but, not the 20” diameter duct and also asked BBWI how they would control a backdraft situation if the fan motor for this system failed. Chris stated that if any of the man doors or the overhead door in the Treatment room were left open for a period of time this could cause a backdraft to the building through the 20” duct. BBWI engineer’s response to this was that “if the fan motor went down, the four (4) manual dampers located in the Treatment room would be manually closed by personnel working in the facility. When manual dampers are closed, the accompanying fan shall be turned off.</p> <p>CN 199 was issued to OCI from BBWI which calls out for backdraft dampers to be installed into both the 18” diameter and 20” diameter systems. Drawing HV-1 currently shows a backdraft damper in the 18” diameter system (D-YDJ-7). AFI and Wheel-a-Brator as stated above asked BBWI why the 20” diameter system does not have a backdraft damper in system for the above-stated reasons. Per Chris Boak, if a backdraft damper was installed into the 20” diameter system there would be no problems with running both systems at the same time. Based on the solution provided by BBWI that no backdraft damper is needed for the 20” duct “as designed” for their system and that Wheel-a-Brator’s design does not require the use of the 20” duct system for their design, the S/C recommends the following to allow both systems to run simultaneously:</p> <p>BBWI to write into their operating procedure for the SSS Equipment a requirement that the four (4) manual dampers for the existing 20” duct system (D-YDJ-1 through D-YDJ-4) be manually closed during the operation of the SSS equipment and that the accompanying fan be “off.” If BBWI does not require a backdraft damper per their design as stated above and BBWI intends to control the backdraft of their system by closing the manual dampers and the S/C does not need the 20” duct system to operate the SSS equipment, this would provide the S/C and BBWI with a workable solution to this issue.</p> <p>If the Contractor wishes to install a backdraft damper into the above-mentioned system, OCI is willing to accommodate this additional work scope in the form of a Contractor-generated change notice and allow compensation for this additional work scope.</p> <p>Please review the above-listed response and recommended action in resolving this issue, if you have questions please contact this office.</p> <p>Thank You,</p> <p>Shawn Hicks</p> <p>OCI/ PM SSSTF Project</p>
199R1	<p>Delete interlock equipment as specified in CN 199/FCR 176 per attached Subcontractor letter.</p> <p>The following is still applicable:</p> <p>It is acceptable to delete LV-3/F-YDJ-3 and LV-4/F-YDJ-4 and replace LV-2/F-YDJ-3 with a higher flow louver with filter and heating unit to meet air scavenger flow requirements while maintaining required ambient temperatures. Addition of a filtered opening between the Decon Bay and the Treatment Area is acceptable.</p> <p>Install backdraft dampers in 18” diameter and 20” diameter exhaust ducts downstream of all branch take-offs and upstream of the building wall. Dampers shall be 18” × 18” and 20” × 20” Ruskin Model S2SS Stainless Steel Commercial Backdraft Dampers. Install transitions from round to square as required.</p> <p>The 18” and 20” backdraft dampers are to be field located just outside of the Decon Building. These dampers shall be seal welded into the spool piece with installation in accordance with requirements of SPC-1485, Section 15801. Prior to installation of the spool piece into the duct, Subcontractor is to contact Contractor QA to verify backdraft operation has not been compromised due to welding operation.)</p> <p>The correct location of D-YDJ-7 is in the 12-in. duct as per Drawing 520059. Change Drawing 520058 to reflect this.</p> <p>CN 199R1 takes precedence over CN 199 in its entirety.</p>

CN #	
199R2	<p>Delete interlock equipment as specified in CN 199/FCR 176 per Subcontractor letter that is attached. The following is still applicable:</p> <p>It is acceptable to delete LV-3/F-YDJ-3 and LV-4/F-YDJ-4 and replace LV-2/F-YDJ-3 with a higher flow louver with filter and heating unit to meet air scavenger flow requirements while maintaining required ambient temperatures. Addition of a filtered opening between the Decon Bay and the Treatment Area is acceptable.</p> <p>Dampers shall be 18” × 18” and 20” × 20” Ruskin Model S2SS Stainless Steel Commercial Backdraft Dampers. Install transitions from round to square as required.</p> <p>The 18” and 20” backdraft dampers are to be field located just outside of the Decon Building. Stitch weld the damper frame in place with 2 welds (1/2 inch long each) on each of the four sides on one face within the duct and seal both faces of the damper frame to the duct wall continuously with RTV. If the damper is inserted through an access hole for assembly, seal weld the access cover plate to the duct. Assemble, weld, and verify proper damper operation prior to welding the spool into the duct. Prior to installation of the spool piece into the duct, Subcontractor is to contact Contractor QA to verify backdraft operation has not been compromised due to welding operations.</p> <p>The correct location of D-YDJ-7 is in the 12-in. duct as per Drawing 520059. Change Drawing 520058 to reflect this.</p> <p>CN 199R2 takes precedence over CN 199R1 in its entirety.</p>
199R3	<p>Subcontractor’s air scavenger system will not function properly with the EF-YDJ-4 exhaust fan in operation.</p> <p>It is acceptable to delete LV-3/F-YDJ-3 and LV-4/F-YDJ-4 and replace LV-2/F-YDJ-3 with a higher flow louver with filter and heating unit to meet air scavenger flow requirements while maintaining required ambient temperatures. Addition of a filtered opening between the Decon Bay and the Treatment Area is acceptable.</p> <p>Install backdraft dampers in 18” diameter and 20” diameter exhaust ducts downstream of all branch take-offs and upstream of the building wall. Dampers shall be 18” × 18” and 20” × 20” Ruskin Model S2SS Stainless Steel Commercial Backdraft Dampers. Install transitions from round to square as required.</p> <p>Electrical Portion Install a Combination Starter in place of the safety switch for fan EF-YDJ-4 and run a ¾” conduit with 5#12 (2 spare) conductors from the starter to the Motor Control Center furnished by the Treatment Equipment Supplier, see attached sketches.</p>
199R4	<p>CN 199R3 does not address the cancellation of CN 199R2. Per the attached letter from Besser dated July 21, 2003 “shut down of the Bechtel System is not required when the Air Scavenger System is in operation.” However the Subcontractor’s HVAC design requires 10K to 12K SCFM of supply air. Accordingly, when the Air Scavenger System is:</p> <p><b>a)</b> started, the existing 4K SCFM Treatment Room Ventilation System shall be automatically shutdown, and</p> <p><b>b)</b> shutdown, the 4K SCFM Treatment Room Ventilation System shall be automatically started.</p> <p>To provide for items a) and b), install a Combination Starter in place of the safety switch for fan EF-YDJ-4 and run a ¾” conduit with 5#12 (2 spare) conductors from the starter to the Motor Control Center furnished by the Treatment Equipment Supplier, see attached sketches.</p> <p>In accordance with the above direction, CNs 199R2 and 199R3 are hereby canceled in their entirety. CN 199R4 takes precedence over all prior CN 199 revisions.</p> <p>Additionally, it is acceptable to delete LV-3/F-YDJ-3 and LV-4/F-YDJ-4 and replace LV-2/F-YDJ-3 with a higher flow louver with filter and heating unit to meet air scavenger flow requirements while maintaining required ambient temperatures. Addition of a filtered opening between the Decon Bay and the Treatment Area is acceptable.</p> <p>Install backdraft dampers in 18” diameter and 20” diameter exhaust ducts downstream of all branch take-offs and upstream of the building wall. Dampers shall be 18” × 18” and 20” × 20” Ruskin Model S2SS Stainless Steel Commercial Backdraft Dampers. Install transitions from round to square as required.</p>
200	<p>Reference Drawing 520050.</p> <p>S/C is allowed to eliminate the requirement for ½” expansion joint material which was to be placed at locations shown in detail 4 on Drawing 520050 (S-5) The 1” × 2” keyway with water stop shall be installed per specification.</p>
201	<p>Reference INEEL Drawing 520040.</p> <p>Section H of referenced drawing calls out for ¾” hat channel to be installed on the ceiling for drywall installation. The S/C is unable to locate ¾” hat channel. It is acceptable to use 7/8” hat channel in lieu of the ¾” hat channel at locations identified by Section H of referenced drawing. Any interferences or changes that may be caused by the thickness change shall be the responsibility of the Subcontractor to fix at no additional charge.</p>
202	<p>Reference INEEL SPC-1485, Sections 2722 and 2732.</p> <p>The above sections of SPC-1485 require that the grinder pumps are equipped with a nameplate stating the unit is accepted for use in NEC Class 1, division 1, group C, D hazardous location with third party approval. Pumps do not have “Division 1” called out on the nameplate.</p> <p>There is no requirement in the NEC for the nameplate to have the Division 1 label, however, NEC paragraph 501.8(A)(1) requires that the pumps be “Identified for Class 1 Division 1 locations.” The Subcontractor shall provide data verifying the Class 1 Division 1 usage.</p>
203	<p>Reference INEEL Drawing 520043 and Drawing 520044.</p> <p>The showers that were specified are made for sheetrock to finish out the edges. The framing detail also shows a drop across the front. In reviewing the details and the reflected ceiling plan, the Subcontractor cannot see that our drawing and the shower manufacturer recommendations match. In the men’s shower room the building column shown enclosed on the west wall will not clear the shower if framed in plumb from ceiling height, but will clear from the top of the shower.</p> <p>Drawing 520044, Sheet A-10, Reflected Ceiling Plan depicts a suspended gyp bd ceiling over the shower stalls. This is incorrect. Drawing 520043, Sheet A-9, Elevations show a furred down area over all shower areas (both Men’s and Women’s) to accommodate installation of shower stalls. Disregard the water board (ceiling) shown above the shower locations on the Reflected Ceiling Plan. Install the showers per manufacturer’s recommendations as shown on INEEL Drawing 520043.</p>

CN #	
203R1	<p>Reference INEEL Drawing 520043 and Drawing 520044.</p> <p>The showers that were specified are made for sheetrock to finish out the edges. The framing detail also shows a drop across the front. In reviewing the details and the reflected ceiling plan, the Subcontractor cannot see that the contract drawing and the shower manufacturer recommendations match. In the men’s shower room the building column shown enclosed on the west wall will not clear the shower if framed in plumb from ceiling height, but will clear from the top of the shower.</p> <p>Drawing 520043, Sheet A-9, Elevations show a furred down area over all shower areas (both Men’s and Women’s) to accommodate installation of shower stalls. This is not to be installed as shown.</p> <p>Drawing 520044, Sheet A-10, Reflected Ceiling Plan depicts a suspended gyp bd ceiling over the shower stalls but does not show walls between the showers. This is incorrect. The reflected ceiling plan should show the stud walls extending up to the ceiling.</p> <p>Install the showers per manufacturer’s recommendations as shown on INEEL Drawing 520043.</p>
204	<p>Some problems have arisen with the placement of the bollards per previous field changes.</p> <p>(AOT) Since the A/C unit and the small AOT transformer on the east of the AOT are exposed to traffic damage, it is necessary to protect them with guard posts</p> <p>Install additional bollards at locations shown on the four sketches that are attached and pertain to the following areas:</p> <p>Headbolt heater location (INEEL Drawing 520070) - five additional locations</p> <p>AOT transformer area (INEEL Drawing 520075) – four additional locations</p> <p>Decon Building lift station (INEEL Drawing 520072) – seven locations as shown plus 4 for additional</p> <p>Sewage lift station (INEEL Drawing 520010) – eight additional locations</p> <p>(The small AOT transformer and the AOT AC on the east of the trailer) Install 4 guard posts centered on the layout of the 2 concrete slabs. The posts shall be placed a maximum of 5’ 6” apart, and 2 ft east of the slabs. (No Sketch attached)</p> <p>All existing bollards that have been installed are acceptable as shown on the sketches. Ensure that a sub-surface has been performed prior to placing bollards.</p>
205	<p>Contract currently requires the following, per the first paragraph below:</p> <p>Clause No. 533 - <u>Supplier Quality Release</u>: The Soil Stabilization System Supplier shall obtain a Supplier Quality Release (SQR) from the authorized Contractor representative prior to shipment of items required by this Contract to the specified final destination. The SQR shall be documented on Contractor form 414.20, Supplier Quality Release. Items received by the Contractor without the required SQR documentation will not be accepted. Unless otherwise authorized by the Contract, the Supplier Quality Release documentation shall be included as With Shipment (WS) data.</p> <p>Delete Quality Clause 533, Supplier Quality Release, from the contract 020966 requirements for the Soil Stabilization System. The main components associated with this system are commercial available items. These items are being fabricated to meet the manufacturer’s data. These items are being shipped from the manufacturer to American Fabrication, Inc. who performs receipt inspection in accordance with their NQA-1 Quality Program prior to shipment to the site. The components that are engineered items will have a manufacturing Inspection/Test Plan submitted for approval. This plan will allow BBWI to establish any inspection hold points for these fabrications. Based on above, there is no need to have a Supplier Quality Release of material or components prior to shipment to American Fabrication, Inc. or from them to the site.</p>
206	<p>CN-7 directs the Subcontractor to sheet rock to the bottom of the support beam (Detail K on A-6) which is at an elevation of 8’-2”. This is 10” below the ceiling height in rooms 103, 108, and 110.</p> <p>Per previous clarification on SFP 182, the sheetrock is 10” below the ceiling height in rooms 103, 108 and 110 is incorrect. The condition described above and as shown on Detail K Dwg A-6 occurs only at the beam along the south wall of the Fire Riser and Electrical Rooms:</p> <p>“It is acceptable to stop the gypsum board 6” to 8” above the finished ceilings, except for walls along the south side and west side of the H.C. slab above the Electrical and Fire Riser Rooms. This area will most likely support some equipment during the life of the facility. Provide gyp. bd. finish to a height to the bottom of the H. C. slab. Per Specification Section Thermal Insulation 07200 requires the batt insulation w/vapor barrier to extend from ground floor to roof structure, at all exterior walls.”</p> <p>Per the Specification Section 07190, Vapor Barriers, 1 of 3, lines 11 through 14:</p> <p>“..... and to the warm side of the insulation installed and exposed in the roofing system and where indicated on the drawings. The vapor barrier shall be continuous over all interior surfaces and all seams shall be sealed.”</p> <p>Within the electrical room and fire riser room, frame in around structural members and hang sheetrock to cover. Also, it is acceptable to attach the vapor barrier to the girts with metal strip.</p>
207	<p>Subcontractor has requested making the potable and raw water tie-ins to underground piping with a HDPE flange to a galvanized flange. Subcontractor has requested to install a dielectric union between the galvanized flange and the copper piping and the specified valve.</p> <p>Attachment detail as described above in the Existing Conditions is acceptable.</p>
208	<p>Specification 15401 5 of 8 lines 11,12,14,15 designate the Potable Water backflow preventer to be a "Watts" 709-QT and the Raw water backflow preventer to be a "Watts" 909-PR. The Subcontractor contacted the Factory Rep. who indicated that these Model Numbers were for backflow preventers that are 2-1/2" or larger. For 2" pipe, the corresponding Model Numbers are 007 MI QT and 909 MI QT respectively. These are 2" preventers Atlas has supplied.</p> <p>S/C is allowed to change the raw water backflow preventer from the Watts 709-QT to the Watts 007M1QT and change the potable water backflow preventer from the Watts 909-PR to the Watts 909M1QT.</p>
209	<p>Reference INEEL Drawing 520064.</p> <p>The ground test wells shown on E-3 call for a 24” concrete collar. The measurement of the outside of the bell is 21-1/2”. The collar will only be 1-1/4” thick. This does not give adequate protection or stability.</p> <p>Delete the requirement for the 2’-0” concrete circle around the well.</p>

CN #	
210	<p>Several questions regarding painting have been asked by the S/C.</p> <p>Are the roof purlins and exposed structural steel to be painted?</p> <p>Does the Contractor want the trenches painted? (The current paint would require the addition of cabasieal for vertical surfaces).</p> <p>Engineering disposition:</p> <p>Roof purlins will not require paint, however (BBWI expects a credit back for a reduction in scope), exposed structural steel at walls will require paint finish, i.e., all exposed areas of the structural steel building frames, specifically the tapered legs in the Decon Area and Treatment Area need to receive paint finish per the Specification Section 09900, 5 of 11 Paint Schedule (Interior) Ferrous Metal. Color shall be light gray.</p> <p>Attached DCN 9 specifies the paint for the trenches, etc. This paint also applies to the (6) bridges in the exterior concrete equipment storage pad. Disregard instructions for paint application at the P-trap and oil /water separator. Paint shall be applied per the specification to all other surfaces.</p> <p>Reference SFP 196R1 for clarification of remaining painting concerns per SFP 196R1.</p> <p>SECTION 09901—P-trap, Oil/Water Separator and Trench Coating System</p> <p><u>PART 1--GENERAL</u></p> <p><u>SUMMARY:</u></p> <p><u>Work includes, but is not limited to:</u></p> <p>Applying the coating system to the interior of the P-trap, the interior of the oil/water separator and the exposed surfaces of the drainage trenches.</p> <p><u>REFERENCES:</u></p> <p>The following document, including others referenced herein, form part of this section to the extent designated herein:</p> <p>AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)</p> <p>ASTM F 1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride Moisture Emissions Test.</p> <p>ASTM D4258, Standard Practice for Surface Cleaning Concrete for Coating</p> <p>ASTM D4259, Standard Practice for Abrading Concrete</p> <p><u>SUBMITTALS:</u></p> <p>Submittals include, but are not limited to the following:</p> <p><u>Product Data:</u> Submit manufacturer’s technical information, including coating label analysis and application instructions for each material proposed for use.</p> <p><u>Surface Preparation and Application Procedure:</u> The Subcontractor shall submit a written procedure outlining the proper surface preparation and coating application procedure for the P-trap, the oil/water separator and the drainage trenches.</p> <p><u>Certificate:</u> Submit copy of certificate of approved Subcontractor status by manufacturer.</p> <p><u>Resume:</u> Submit a resume of the Subcontractor’s and applicators qualifications.</p> <p><u>Warranty:</u> Provide a written warranty from the manufacturer against defects of materials for a period of one (1) year, beginning with date of substantial completion of the project.</p> <p>See Section 01300, Submittals and the Vendor Data Schedule, for additional submittal requirements.</p> <p><u>QUALITY CONTROL:</u></p> <p><u>Applicator Qualifications:</u> Engage an experienced applicator that is regularly engaged in the application and installation of, and has successfully completed, coating system applications similar in material and extent to those in this project.</p> <p><u>Technical Representative:</u> A qualified manufacturer’s technical representative shall supervise the coating installation.</p> <p><u>Single Source Responsibility:</u> Provide primers, undercoat and caulking material produced by the same manufacturer as the finish coats and as recommended for the particular substrate and finish coat.</p> <p><u>Pre-coating Meeting:</u> A pre-coating meeting shall be held a minimum of one week prior to applying the coating. The coating Subcontractor shall submit an agenda of items to discuss 3 days prior to the meeting. Agenda items which may be included but not limited to are: equipment to be used, safety equipment to be used, method to safely apply the coating and comply with safety regulations, materials to be used, control of materials, surface preparation of the concrete, methods of repair if required, curing of coatings, temperature controls, etc. The manufacturer’s designated technical representative shall be at the meeting.</p> <p><u>Coating Color:</u> Color shall be Silver Gray.</p> <p><u>Surface Preparation:</u> Strictly follow the manufacturer’s recommendations.</p> <p><u>Application:</u> Strictly follow the manufacturer’s application instructions.</p>

CN #	
210 (cont.)	<p><b><u>DELIVERY, STORAGE, AND HANDLING:</u></b></p> <p><b><u>General:</u></b> Deliver materials to the job site in the manufacturer’s original, new, unopened packages and containers bearing the manufacturer’s name and label, and the following information:</p> <p>Name or title of material</p> <p>Product description (generic classification or binder type)</p> <p>Manufacturer’s name, stock number and date of manufacture</p> <p>Contents by volume, for major pigment and vehicle constituents</p> <p>Thinning instructions if required</p> <p>Application instructions</p> <p>Color name and number</p> <p>Handling instructions and precautions.</p> <p><b><u>Storage:</u></b> Store materials not used in tightly covered containers in a well-ventilated area in accordance with the manufacturer’s recommendations. Maintain containers used in storage in a clean condition, free of foreign materials and residue. Volatile liquids and used wiping and cleaning rags shall be kept in tightly closed metal containers. After each day’s work, empty coating cans and other waste shall be removed from the premises and disposed of as directed by the Contractor. Only one day’s supply of coating may be brought into the work area. Any extra must be removed from the work area at the end of each day unless otherwise approved by the Contractor. The Subcontractor shall store and handle all coating in a well-ventilated area or room.</p> <p>Unique or special coating requirements are addressed in the following sections.</p> <p><b><u>Warranty:</u></b></p> <p>The Subcontractor and the manufacturer shall furnish a guarantee of the EPO-FLEX Industrial Coating System for a period of one year after installation. The labor and material guarantee shall include loss of bond and wear-through to the concrete substrate from normal use.</p> <p>Not included in the warranty is damage due to structural design deficiencies including but not limited to slab cracking from lateral, vertical or rotational movement, and gouging or other damage due to fork lifts, other equipment, delamination caused by vapor transmission, acts of God, or other elements beyond the scope of protection this system nor causes not related to the system materials.</p> <p>In case of a warranty claim, the Contractor will notify the Subcontractor in writing within 30 days of the first appearance of problems covered under this warranty. The Contractor will provide free and unencumbered access to the area during normal working hours for warranty rework. Remedy is limited to direct repair of the EPO-FLEX Floor System.</p> <p><b><u>PART 2--PRODUCTS</u></b></p> <p><b><u>MATERIALS:</u></b></p> <p>The coating shall be readily broken up with paddle to a smooth consistency and shall show easy brushing or spraying properties. Products containing lead or known carcinogens shall not be used.</p> <p><b><u>COATING SCHEDULE:</u></b></p> <p><b><u>Concrete (P-trap, the oil/water separator, and the drainage trenches):</u></b></p> <p><b><u>EPO-FLEX Coating System:</u></b></p> <p style="padding-left: 40px;">Trenches, P-Trap, and Oil/Water Separator</p> <p><b><u>Penetrating Primer:</u></b> General Polymers 3579 Universal Penetrating Primer</p> <p style="padding-left: 40px;">First Base Coat: General Polymers 3552W EPO-FLEXIBLE WALL EPOXY</p> <p><b><u>Second Coat:</u></b> General Polymers 3552W EPO-FLEXIBLE WALLEPOXY</p> <p><b><u>Topcoat:</u></b> General Polymers Chemical Resistant High Performance CR Epoxy Coat (Two component) 3744 P</p> <p>Coatings shall be compatible with vertical wall applications.</p> <p>General Polymer’s Cove Sealant</p> <p style="padding-left: 40px;">The cove sealant required shall conform to General Polymers Cor-Seal PS.</p> <p style="padding-left: 40px;"><b><u>Minimum Dry Film Thickness (DFT) of Coating</u></b></p> <p style="padding-left: 40px;">Primer – 250 sf/gal = 6.4 mils</p> <p style="padding-left: 40px;">3552W - first coat 100 sf/gal = 16 mils</p> <p style="padding-left: 40px;">3552W - second coat 100 sf/gal = 16 mils</p> <p style="padding-left: 40px;">3774P – 160 sf/gal = 10 mils</p>



CN #	
210 (cont.)	<p><u>Known Suppliers:</u>  General Polymers (Website www.generalpolymers.com) 1-800-543-7694  Sherwin Williams 208-522-2811 or 208-241-8581, 1025 East 17<sup>th</sup> Street, Idaho Falls, ID  General Polymers –Technical Representative 208-523-5530 or 208-520-1010.</p>
210R1	<p>DCN 9 specifies the paint for the trenches, etc. This paint also applies to the (6) bridges in the exterior concrete equipment storage pad, per CN 230. Disregard instructions for paint application at the P-trap and oil/water separator. Paint shall be applied per the specification to all other surfaces.</p> <p>Rev 1 Justification:  Per previously attached DCN 9 specification, the Subcontractor was required to provide a qualified technical representative to supervise installation. This requirement is hereby deleted from DCN 9 specification (Section 09901). However, the installer shall submit certification on the installation of this product through vendor data system, VDS number 296. Subcontractor shall redline DCN 9 specification (Section 09901) to reflect this change. The remainder of DCN 9 specification (Section 09901) remains in effect.  CN 210R1 takes precedence over and deletes CN 210.</p>
211	<p>Reference INEEL Drawing 520040.</p> <p>The angle iron support shown on CN 174 was added due to the interference with the corner frame of the building. Per supplemental submittal drawing from USA , the angle was supposed to be 4” × 4”. This support is too small to support the hollow core panel and still receive the 2” bearing that is required per the G&amp;S letter that had been requested by OCI and BBWI. Subcontractor requests to use 6” × 6” angle in lieu of the 4” × 4” angle.</p> <p>It is acceptable to change the angle support in question from 4” × 4” to the 6” × 6” (same thickness) contingent upon approval of an appropriate letter from USA Building Systems. Subcontractor to submit letter for approval through vendor data system. Upon approval and installation, the drawings shall be redlined to reflect this change.</p>
212	<p>Reference INEEL Drawings 520059 and 520060.</p> <p>S/C has stated on SFP 221 that the 18” SS duct needs to be raised from the 10’-6” centerline height to a 12’-1” centerline height, and the 20” SS duct needs to be raised from the 13’-4” centerline height to a 14’-2” centerline height. The firewater line and the plumbing lines interfere with the 18” SS duct, and raising the 18” duct forces up the 20” duct.</p> <p>S/C shall raise the 18” and 20” ducts as required to clear fire and plumbing lines. All other questions per SFP 221 have been responded to as a clarification, on SFP 221.</p>
213	<p>Asphalt placed on Aspen Ave. (NCR 29258) and Redwood St. (NCR 29387) is in nonconformance per the specifications, specifically: Core samples collected from Aspen Ave. and Redwood St. indicated that the thickness of the pavement is not in compliance with the specification (&lt;3”). Compaction testing on the exit lane to Aspen Ave. is less than the specification. Lack of workmanship is apparent in the placement of the asphalt in the SSSTF parking lot on Aspen Ave.</p> <p>Disposition:  The S/C shall provide a chip-seal over all areas that were paved in 2002, on Aspen Ave. including the parking lot at the SSSTF and the exit lane.  The Subcontractor shall provide a chip-seal over Redwood St. from station 29+20 (beginning north of Ponderosa Ave) and going south to the end of the pavement constructed in 2002.  The specification for the chip-seal is provided in attachment #1 of CN 213.</p>
213R1	<p>CN 213R1 Justification:  Screening analysis of the aggregate performed by the Materials test lab indicated the chip size did not meet the requirements of class 1 or 2. Attached is a copy of the revised chip seal specification, which includes the allowance of class 3 gradations.</p> <p>Existing Conditions:  Asphalt placed on Aspen Ave. (NCR 29258) and Redwood St. (NCR 29387) is in nonconformance per the specifications, specifically: Core samples collected from Aspen Ave. and Redwood St. indicated that the thickness of the pavement is not in compliance with the specification (&lt;3”). Compaction testing on the exit lane to Aspen Ave. is less than the specification. Lack of workmanship is apparent in the placement of the asphalt in the SSSTF parking lot on Aspen Ave.</p> <p>Disposition:  The S/C shall provide a chip-seal over all areas that were paved in 2002, on Aspen Ave. including the parking lot at the SSSTF and the exit lane.  The Subcontractor shall provide a chip-seal over Redwood St. from station 29+20 (beginning north of Ponderosa Ave), and going south to the end of the pavement constructed in 2002.  The specification for the chip-seal is provided in attachment #1 of CN 213.  CN 213R1 takes precedence over and deletes CN 213 in its entirety.</p>
214	<p>Per the reference, CN the S/C installed six integral concrete trench wall support beams (6 in. wide by 8 in. deep) across the contaminated equipment storage pad trench. The trench wall support beams were spaced approximately every 16 ft (+ or - 2 ft.). The concrete trench wall support beams have begun to crack as shown in the two pictures on the following page.</p> <p>Subcontractor shall break out the four support beams that have cracked. Do not cut or otherwise remove existing rebar. Drill and grout one #5 bar (24” long) into top of each side of trench wall at center of each removed support beam. This corresponds to an elevation of approximately 3” below construction joint at bottom of slab/top of trench wall. Embed bars 4” into wall. Allow grout to cure.</p> <p>Restore existing rebar positions, form, and re-pour support beams to original dimensions (6” wide × 8” deep). Concrete used shall be per approved 4500-psi mix design for slab. Prior to pour, apply bonding agent per specification where fresh concrete will bear against existing concrete.</p>

CN #	
215	<p>Reference INEEL Drawing 520067.</p> <p>On reference drawings and specifications, Subcontractor cannot locate elevations to install several light fixtures.</p> <p>The mounting height of fixture types D, E, F, and G will vary in accordance with the slope of the ceiling. The bottom of the fixture should be approximately 24” below the ceiling. The mounting height of the type H fixtures shall be approximately 10’ above finished floor, this elevation can vary at the Subcontractor’s discretion to avoid interferences. The mounting height of the type K fixtures will vary depending on the location. The type K fixtures over the rollup doors shall be mounted approximately 12” above the top of the door. The type K fixtures on the west end of the south wall shall be mounted under the canopy, as close as possible to the top of the canopy between the doors as shown. The remainder of the type K fixtures shall be mounted approximately 9’ above grade in the locations shown. These are not exact elevations and are subject to adjustments to accommodate other interferences.</p>
216	<p>SPC-1481 Section 8.2, “Instrumentation for controlling the process and taking data must be calibrated by the INEEL Calibration Laboratory.”</p> <p>Revise the above statement from Section 8.2 to: “Instrumentation for controlling the process and taking data may be calibrated by the INEEL Calibration Laboratory.”</p> <p>Add the following to Section 8.2: “In addition, instrumentation/equipment calibrations are acceptable by an off-site laboratory that implements and maintains a calibration system in accordance with ANSI/NCSL Z540-1, American National Standard for Calibration; ISO Guide 25/EN 45001, General Requirements for the Competence of Calibration and Testing Laboratories; or ISO/IEC/EN 17025, General Requirements for the Competence of Calibration and Testing Laboratories.”</p> <p>All Document Submittal Requirements remain in effect.</p>
217	<p>The mezzanine handrail, shown on INEEL drawing 520038, cannot be installed as shown. Conduit and piping that penetrate the CMU wall and run to various locations in the building are in the way.</p> <p>Shift the north guardrail (running east to west) to the south by approximately 6 to 10 inches as required to eliminate interference with conduit extending vertically out of the CMU walls below. The guardrail is to be installed to the north of the conduit rising from the electrical and fire riser rooms below.</p> <p>Adjust intersecting rail and gate at west side to accommodate the shift of the north handrail. Reduce length of west guardrail per final location of north guardrail.</p>
218	<p>In order to complete turnover activities, redline drawings and Vendor Data must be completed and submitted. S/C shall submit the below Vendor Data such that <b>all</b> can be approved and accepted by July 31, 2003. This date is critical to support ICDF Complex operations.</p> <p>1. Sanitary Sewer System</p> <p>    VDR 26788, Current Status: B</p> <p>    VDR 29137, Current Status: C</p> <p>    VDR 28493, Current Status: B</p> <p>    VDR-51029, Current Status: B</p> <p>    VDR-51038, Current Status: C</p> <p>    VDR needed for the sanitary sewer system layout, VDS Item # 137</p> <p>    VDR needed for the material and test certificates, VDS Item # 297</p> <p>2. Administrative Office Building</p> <p>    VDR-58464, Current Status: Pending</p> <p>    VDR-46233. Current Status: Pending</p> <p>    VDR-57265, Current Status: C</p> <p>    VDR-58464, VDS 214 Design Calculation need to be resubmitted for canopy foundation design calcs, Current</p> <p>Status: B</p> <p>    VDS-200</p> <p>    VDS-201</p> <p>3. Underground Fire Water System</p> <p>    VDS-82, Firewater supply system as-built</p> <p>    VDS-85, Final inspection form</p> <p>    VDS-86, Materials and test certificate</p> <p>4. Truck Scale</p> <p>    VDR 54791, Current Status: B</p>

CN #	
218 (cont.)	<p>5. Raw and Potable Water System</p> <p>VDR-49817, Current Status: C    VDR-49837, Current Status: C</p> <p>VDR-49842, Current Status: C</p> <p>VDR-49847, Current Status: C</p> <p>VDR needed for the Underground water system layout VDS Item # 144</p> <p>VDS-17: O&amp;M Manual</p> <p>VDS-18: Material and test certificate</p> <p>6. Communications</p> <p>VDR-45445, Current Status:</p>
219	<p>There is no specification reference related to VDS item #246: Traceability Procedure.</p> <p>Delete VDS Item #246. The original procurement specification for the Soil Stabilization System had vendor data requirements referring to Quality Clause 442 for the criteria for the Traceability Procedure. This quality clause was never added to the contract as a requirement. Therefore, the requirement does not exist. In addition, based on the quality level of this system and the fact that the major operation components are commercial items, there is no need for "traceability" of materials or components. CMTRs may still be wanted as submittal requirements. But cradle to grave traceability is not need.</p> <p>Various vendor data exists for the SSS equipment that is not required or needs to be changed based on project management decisions.</p> <p>In addition to the above, the following modifications to the vendor data schedule need to be incorporated:</p> <p>Item 237: Delete</p> <p>Item 248: Delete (Note: Continuity testing will still be required as per contract construction specification SPC-1485)</p> <p>Item 249: Change from Prior to Installation to Prior to Test</p> <p>Item 250: Delete</p> <p>Item 251: Change from Prior to Shipment to Before Final Acceptance</p> <p>Item 252: Delete</p> <p>Item 253: Change from Prior to Shipment to Before Final Acceptance</p> <p>Item 254: Change Procedure/Instructions to O&amp;M Manual and add Maintenance Manual and Operating Manual to this submittal. Also, change from Prior to Shipment to Prior to Installation.</p> <p>Item 255: Delete</p> <p>Item 256: Delete</p> <p>Item 258: Add Lifting and Tie-Down to Description</p> <p>Item 262: Change Prior to Shipment to Prior to Installation</p> <p>Item 263: Delete</p> <p>Item 265: Change from Prior to Shipment to After Test</p> <p>Item 273: Delete</p>
220	<p>Material and Equipment:</p> <p>In support of the ICDF Complex, which encompasses the SSSTF project, a (Full Container Staging Area) and a (Bulk Soil Stockpile Staging Area) are required. A subcontract has been awarded to Phenix Construction to construct these staging areas.</p> <p>Ovard Construction shall remove all materials and equipment, excluding temporary power from the attached, marked up sketch for Areas 1 and 3. Materials and equipment removed shall be placed within a designated location within Area 1. The Subcontractor shall turn these areas over per attached INEEL Form 432.04, Inspection and Project Transfer. This work shall be completed COB 7/14/03.</p> <p>Temporary power distribution and control:</p> <p>(After partial transfer of items listed below has been completed)</p> <p>During the performance of work, the Subcontractor shall give the STR a 48-hr advance notice prior to shutting off power associated with CPP-1689 (AOT), the sanitary lift station, and truck scales. The Subcontractor will provide an estimated outage duration to Construction Management representative.</p> <p>The Subcontractor shall address any impacts to the Subcontractor's schedule, due to electrical outages, or reduction in area in a SFP.</p>

CN #	
220R1	<p>Material and Equipment:</p> <p>In support of the ICDF Complex which encompasses the SSSTF project, a (Full Container Staging Area) and a (Bulk Soil Stockpile Staging Area) are required. A subcontract has been awarded to Phenix Construction to construct these staging areas. Ovard Construction shall remove all materials and equipment, excluding temporary power from the attached, marked up sketch for Areas 1 and 3. Materials and equipment removed shall be placed within a designated location within Area 1. The Subcontractor shall turn these areas over per attached INEEL Form 432.04, Inspection and Project Transfer. This work shall be completed COB 7/14/03.</p> <p>Temporary power distribution and control:</p> <p>(After partial transfer of items listed below has been completed)</p> <p>During the performance of work, the Subcontractor shall give the STR a 48 hr advance notice prior to shutting off power associated with CPP-1689 (AOT), the sanitary lift station, and truck scales. The Subcontractor will provide an estimated outage duration to Construction Management representative.</p> <p>Rev 1 Justification:</p> <p>The ICDF Complex requires additional storage areas not previously addressed in CN 220. Refer to the attached sketch for new zoning requirements.</p> <p>CN 220R1 takes precedence over and henceforth cancels CN 220.</p>
221	<p>Reference INEEL Drawing 520053.</p> <p>Referenced drawing shows attaching support unistrut to the metal stud walls with 3/8” toggle bolts. The pilot hole required for a 3/8” toggle is 1” diameter. This does not leave much material in the 1-1/2” surface area for stud strength.</p> <p>Subcontractor shall provide and install hose reel support per attached sketch 1 and 2.</p>
222	<p>The mounting channels for the conduit on the truck scales that were installed are less than 12 inches long. SPC-1485, Section 16110 states that all above-grade, exposed conduit shall be anchored to mounting channels a minimum of 12 inches long.</p> <p>For the truck scale, it is acceptable to have the conduit mounting channels less than the specified 12 inches. The 12-inch minimum is for areas where future conduit installation is likely. The area in question is remote, additional conduits are not anticipated.</p>
223	<p>Reference INEEL Drawing 520035, (SPC-1485 Section 8362).</p> <p>The center wall running down “B” line is a steel stud wall, which the overhead door springs, must mount to. S/C is concerned that there will not be enough support with the steel stud wall to support the springs, the operator, and the track.</p> <p>Reference the attached sketches for the overhead door (Door #17) framing and support for the above-mentioned items.</p>
223R1	<p>Reference INEEL Drawing 520035, (SPC-1485 Section 8362).</p> <p>The center wall running down “B” line is a steel stud wall, which the overhead door springs must mount to. S/C was concerned that there would not be enough support with the steel stud wall to support the springs, the operator, and the track. CN 223 was issued to the Subcontractor with detailed sketches for supporting the door. However, the Subcontractor did not install the overhead door backing in accordance with CN 223. The Subcontractor used a detail similar to the backing specified on INEEL Drawing 520041. For the Subcontractor’s convenience, BBWI shall allow the as-installed condition per the attached sketches.</p> <p>CN 223R1 takes precedence over and deletes CN 223 in its entirety.</p>
224	<p>Floors:</p> <p>INEEL Drawing 520041, sheet A-7, Room Finish Schedule, states that all floors and bases unless otherwise noted, remain conc. w/epoxy as shown in the floor columns. CN 185 / FCR 170 allowed an or-equal product, “Rock Trend”, with non slip media, for the concrete floor finishes. Application of non-slip media applies to all concrete floors except the PPE Change Room. S/C shall omit broadcast of the non-slip grit on this floor only.</p> <p>Change to Room Finish Schedule:</p> <ol style="list-style-type: none"> <li>1. Room 114, Women’s T.R. Vestibule identified the ceiling as concrete H.C. slab. This shall now identify suspended water board.</li> <li>2. The following rooms require SANIFLEX epoxy system on all ceilings and wall surfaces: Room No. 110, RadCon Room, ceilings and walls. Room No. 111, PPE Change Room, ceiling and walls.</li> </ol> <p>SANIFLEX Interior Wall System, Sherwin–Williams or approved equal (Apply to all walls and ceilings).</p> <p>Block Filler (for CMU walls): As specified in the specification is compatible with SANIFLEX Interior Wall System.</p> <p>Primer: General Polymers Standard Primer/Binder, 3579</p> <p>Base Coat: 3552W EPO-FLEX Flexible Wall Epoxy</p> <p>Finish Coat: 4685W POLYCOTE 100% Solids Polyurethane Enamel.</p>
225	<p>All work associated with the installation of the head bolt heaters, e.g. load center, safety switches, cable pull etc. shall be expedited such that all activities are completed by 7/24/03. Please note that this CN is not an acceleration of original Work Scope that was to be completed by April 22, 2003. BBWI will, however, compensate the Subcontractor for modifications to connect and to obtain Temporary Power to energize the Head Bolt Heater Power System.</p> <p>Temporary power from the SSSTF overhead power line shall be used to energize the system described above. SO cable, disconnect etc. shall be provided and installed as typical of other temporarily energized systems currently in use on the SSSTF.</p>

CN #	
225R1	<p>All work associated with the installation of the head bolt heaters, e.g. load center, safety switches, cable pull etc. shall be expedited and completed ASAP. Please note that a portion of this CN is not an acceleration of original Work Scope that was to be completed by April 22, 2003. BBWI will however, compensate the Subcontractor for modifications to connect and to obtain Temporary Power to energize the Head Bolt Heater Power System, and perform all work associated with energizing the RadCon trailer described below.</p> <p>Temporary power from the SSSTF overhead power line shall be used to energize the system described above. SO cable, disconnect etc. shall be provided and installed as typical of other temporarily energized systems currently in use on the SSSTF.</p> <p>CN 225R1 justification:</p> <p>A power supply is needed for the RadCon trailer currently located in Area 3, southwest of the CPP-1688 (Decon Bldg). S/C shall provide and install materials per the attached sketches. Testing shall be in accordance with SPC-1485.</p>
225R2	<p>All work associated with the installation of the head bolt heaters, e.g. load center, safety switches, cable pull etc. shall be expedited and completed ASAP. Please note that a portion of this CN is not an acceleration of original Work Scope that was to be completed by April 22, 2003. BBWI will however, compensate the Subcontractor for modifications to connect and to obtain Temporary Power to energize the Head Bolt Heater Power System, and perform all work associated with energizing the RadCon trailer described below.</p> <p>Temporary power from the SSSTF overhead power line shall be used to energize the system described above. SO cable, disconnect etc. shall be provided and installed as typical of other temporarily energized systems currently in use on the SSSTF.</p> <p>CN 225R1 justification:</p> <p>A power supply is needed for the RadCon trailer currently located in Area 3, southwest of the CPP-1688 (Decon Bldg). S/C shall provide and install materials per the attached sketches. Testing shall be in accordance with SPC-1485.</p> <p>CN 225R2 justification:</p> <p>Current direction per referenced DCN 13 / CN 225R1 is to ground the transformer and transformer pad to one grounding rod. It has been determined that the feed to this building is a service entrance as defined by the NEC; Article 250.24 (A) (2) requires a grounding electrode at the outdoor transformer along with a grounding electrode and connection at the service based on Article 250.24 (A) (1) (reference Exhibit 250.9 in the Handbook). Therefore, the Subcontractor shall install the additional grounding electrode as required by the NEC.</p> <p>The Subcontractor is to perform repairs on the following:</p> <p>The RadCon trailer electrical panel currently has several breakers with multiple wires terminated on them, this violates NEC 110.14(A). The deadfront currently has knockouts missing that are patched with electrician's tape, this violates NEC 110.12 (A). The existing wiring inside the panel is not installed in a neat and workmanlike manner, NEC 110.12. These items shall be repaired prior to energizing this panel.</p> <p>The Subcontractor shall provide a circuit directory attached to the panel per NEC 408.4. The panel schedule shall be constructed after the panel is energized, for ease of circuit identification.</p> <p>CN 225R2 includes all the work described in CN 225 and CN 225R1 and hereafter takes precedence over and deletes CN 225 and CN 225R1. Drawings have been provided with CN 225R1, and shall continue to be used and redlined accordingly.</p>
226	<p>Reference INEEL Drawing 520038.</p> <p>The handrail dimensions shown on A-4 are 20'-6" × 7'-8". CN 154 changed the dimensions for rooms 101 and 102. The room change also altered the size of the mezzanine above these rooms by a total of 20 inches. The current handrail was constructed to the measurements of drawing A-4 and the handrail will not fit.</p> <p>Reduce length of the handrail as required to match dimensional change on CN 154. Welding shall be complete joint penetration, ground smooth, and in accordance with Section 5100 of SPC-1485. Touch-up painting shall be performed in accordance with Section 9900 of SPC-1485.</p>
227	<p>¾" crushed aggregate base across the front of Area 4 parking and gated entryway has been mixed with some pit-run gravel.</p> <p>S/C shall remove large rocks (3–4 inches in diameter), and re-grade the area as required to the lines and grades shown on the plans and compact to project specifications. Pave the area to the dimensions shown on the plans. Place and compact additional pit-run gravel to transition from the edge of the pavement to the scales as directed by contractor's representative.</p>
228	<p>Reference INEEL Drawings 520006 (C-2) and 520008 (C-4).</p> <p>Reference Procurement Specification 1484, Drawing 520155 (C-1).</p> <p>Paving is shown up against the north foundation of the AOT. S/C has scheduled final asphalt work to be performed in the first week of August. Due to partial project turnover of the AOT, access to the CPP-1689 (AOT), is imperative.</p> <p>Subcontractor shall perform the following work:</p> <p>Temporarily remove stairs and ramp, which currently provides access into the AOT. Construct a 5-foot 6-inch wide concrete slab, 37-foot 6-inches long (see the attached sketch). Form around the existing foundations. Concrete shall be Class 40. Place rebar at 15-inches on center each way. The concrete and rebar shall be in accordance with Section 03300 of the SPC-1485. Provide a broom finish on the concrete slab.</p>
229	<p>SFP 237 states the following:</p> <p>Desert Sage Contractors has been directed to remove the silt fence that was installed on the north side of Aspen street. We find no mention of removal and disposal in the project plans or specifications. Reimburse Desert Sage for all cost associated with removal and disposal of 2600 LF of silt fence.</p> <p>S/C shall be reimbursed for the removal and disposal of silt fence and posts, as described in the paragraph directly above.</p>

CN #	
230	<p>Existing bridge design has been approved for the replacement of the trench bridges due to cracking per CN 172 / FCR-187. An alternate bridge detail for the trenches on the Contaminated Equipment Pad has been requested by the project to eliminate any alteration to the existing structure.</p> <p>Remove all existing bridges. Cut all of the exposed rebar associated with the bridges. Perform proper patching and repair at these locations and other locations as required per specification. Prepare all surfaces to receive coating per the specifications, then, apply coating per specifications. After adequate coating curing time, form and pour new trench bridges as shown in the attached sketch (six places, corresponding to original locations). Materials and installation shall be in accordance with SPC-1485, Section 03300 using class 4500 concrete and previously approved mix design for slab/trench. After adequate curing time, prepare visible surfaces of bridges to receive coating per specifications.</p> <p>Then, apply coating to these surfaces per specifications.</p> <p>Subcontractor is to coordinate proper repair of the post-tensioned slab (due to removal of the bridges) with his sub-tier prior to surface preparation for coating.</p>
230R1	<p>Existing bridge design has been approved for the replacement of the trench bridges due to cracking per CN 172 / FCR-187. An alternate bridge detail for the trenches on the Contaminated Equipment Pad has been requested by the project to eliminate any alteration to the existing structure.</p> <p>Remove all existing bridges. Cut all of the exposed rebar associated with the bridges. Perform proper patching and repair at these locations and other locations as required per specification. Prepare all surfaces to receive coating per the specifications, then, apply coating per specifications. After adequate coating curing time, form and pour new trench bridges as shown in the attached sketch (six places, corresponding to original locations). Materials and installation shall be in accordance with SPC-1485, Section 03300, using class 4500 concrete and previously approved mix design for slab/trench. After adequate curing time, prepare visible surfaces of bridges to receive coating per specifications.</p> <p>Then, apply coating to these surfaces per specifications.</p> <p>Subcontractor is to coordinate proper repair of the post-tensioned slab (due to removal of the bridges) with his sub-tier prior to surface preparation for coating.</p> <p>Rev 1 Justification:</p> <p>CN 210R1, which includes specification Section 09901 (P-Trap, Oil/Water Separator, and Trench Coating System), specifies a General Polymers paint product to be applied on the (6) benches/bridges in the exterior concrete equipment storage pad, referenced on CN 230. These concrete benches/bridges have been cast in the exterior contaminated equipment pad trench as of 10.21.03. The trench benches (or bridges) shall be allowed to cure for 21 days, after which the benches/bridges shall be painted with Sikaguard 62, in lieu of a General Polymers paint. Application of the paint shall only be made if the surface temperature of the benches is 40 F or above.</p> <p>CN 230R1 takes precedence over and deletes CN 230. CN 230R1 deletes the requirement for applying General Polymer paint to the benches/bridges set forth in CN 210R1. The remaining content stated in CN 230 still applies and is hereby transferred into CN 230R1.</p>
231	<p>Reference SPC-1485, Section 9250.</p> <p>The “3” line wall from “B” line to “A” line and the “B” line wall require gypsum board backing. Per the referenced section, this gypsum board is to be taped, mudded, readied for paint, and textured.</p> <p>It is acceptable to delete final preparation for painting and deleting the texturing requirement. The joints and fasteners are still to be treated to comply with directions of the water-resistant joint compound manufacturer, as stated in the specification. Final blending and sanding as required for a finished wall is not required.</p>
231R1	<p>Reference SPC-1485, Section 9250.</p> <p>The “3” line wall from “B” line to “A” line and the “B” line wall require gypsum board backing. Per the referenced section, this gypsum board is to be taped, mudded, readied for paint, and textured.</p> <p>It is acceptable to delete final preparation for painting and deleting the texturing requirement. Per specifications, treat fastener heads and embed tape with finish of 2 coats of joint compound. Final blending and sanding as required for a finished wall is not required. Water resistant joint compound is applicable to water board application only. This does not apply to the above application for the center wall and 3-line of the facility, which is 5/8” gypsum board.</p> <p>CN 231R1 takes precedence over and deletes CN 231 in its entirety.</p>
231R2	<p>Reference SPC-1485, Section 9250.</p> <p>The “3” line wall from “B” line to “A” line and the “B” line wall require gypsum board backing. Per the referenced section, this gypsum board is to be taped, mudded, readied for paint, and textured.</p> <p>It is acceptable to delete final preparation for painting and deleting the texturing requirement. Per specifications, treat fastener heads and embed tape with finish of 2 coats of joint compound. Final blending and sanding as required for a finished wall is not required. At all other locations, install joint compound per specification excluding the use of water resistant joint compound.</p> <p>CN 231R2 takes precedence over and deletes CN 231R1 in its entirety.</p>
232	<p>Reference SPC-1485, Section 13120 Page 11 lines 16–18.</p> <p>Size of Sealing tape for interior liner panels as specified as "Not less than 1/2" wide and 1/4" thick" will not allow the 26-gauge liner panels to lap properly (close tightly). Please see attached letter from USA and their recommendation to use 3/32" × 3/8" in lieu of 1/2" × 1/4".</p> <p>It is acceptable to use the 3/32” thick × 3/8” wide sealing tape in lieu of the specified ½” × ¼” metal liner sealing tape. All other specifications are still applicable.</p>

CN #	
233	<p>Reference INEEL Dwg 520059, 520062, 520066 and SPC-1485, Section 15800.</p> <p>Specification and drawing do not show adequate detail. Subcontractor needs thermostat model numbers, locations, elevations, and control requirements for the heaters.</p> <p>As noted on the SFP-226 clarification, heaters HTR-YDJ-13 through HTR-YDJ-22 have integral thermostats. If thermostats are not mounted on the units, they shall be located below the units at 5 ft above the finished floor.</p> <p>For heaters HTR-YDJ-1 through HTR-YDJ-12 and HTR-YDJ-23, the following shall apply:</p> <p>Individual thermostats are to control the following sets of heaters:</p> <p>HTR-YDJ-1 through HTR-YDJ-3 (Circuit 1,3,5) – Thermostat location: 5 ft above finished floor on east wall of decon bay.</p> <p>HTR-YDJ-4 through HTR-YDJ-6 (Circuit 2,4,6) – Thermostat location: 5 ft above finished floor on west wall of decon bay.</p> <p>HTR-YDJ-7 through HTR-YDJ-9 (Circuit 7,9,11) – Thermostat location: 5 ft above finished floor below HTR-YDJ-7.</p> <p>HTR-YDJ-10 through HTR-YDJ-12 and HTR-YDJ-23 (Circuit 8,10,12) – Thermostat location: 5 ft above finished floor below HTR-YDJ-12.</p> <p>Contactors for heaters HTR-YDJ-1 through HTR-YDJ-12 and HTR-YDJ-23 are to be placed in the electrical room south of the PCC-YDJ-300 panel. Contactors shall be NEMA Size 3, Full Voltage, 460 VAC, 3-Pole with coil voltage compatible with Thermostat specified below. Install contactors in NEMA Type 12 enclosure.</p> <p>All thermostats are to be placed at an elevation of 5 feet above finished floor and shall have a temperature range of at least 40 to 100 degrees F, with closure of contacts on temperature fall. Thermostats shall be capable of operating contactors described above.</p>
233R1	<p>Reference INEEL Dwg 520059, 520062, 520066 and SPC-1485, Section 15800.</p> <p>Specification and drawing do not show adequate detail. Subcontractor needs thermostat model numbers, locations, elevations, and control requirements for the heaters.</p> <p>As noted on the SFP-226 clarification, heaters HTR-YDJ-13 through HTR-YDJ-22 have integral thermostats. If thermostats are not mounted on the units, they shall be located below the units at 5 ft above the finished floor.</p> <p>For heaters HTR-YDJ-1 through HTR-YDJ-12 and HTR-YDJ-23, the following shall apply:</p> <p>Individual thermostats are to control the following sets of heaters:</p> <p>HTR-YDJ-1 through HTR-YDJ-3 (Circuit 1,3,5) – Thermostat location: 5 ft above finished floor on east wall of decon bay.</p> <p>HTR-YDJ-4 through HTR-YDJ-6 (Circuit 2,4,6) – Thermostat location: 5 ft above finished floor on west wall of decon bay.</p> <p>HTR-YDJ-8, HTR-YDJ-9 and HTR-YDJ-12 (Circuit 7,9,11) – Thermostat location: 5 ft above finished floor below HTR-YDJ-8.</p> <p>HTR-YDJ-7, HTR-YDJ-10, HTR-YDJ-11 and HTR-YDJ-23 (Circuit 8,10,12) – Thermostat location: 5 ft above finished floor below HTR-YDJ-7.</p> <p>Contactors for heaters HTR-YDJ-1 through HTR-YDJ-12 and HTR-YDJ-23 are to be field routed and installed above the electrical room, on top of the mezzanine. Contactors shall be NEMA Size 3, Full Voltage, 460 VAC, 3-Pole with coil voltage compatible with Thermostat specified below. Install contactors in NEMA Type 12 enclosure.</p> <p>All thermostats are to be placed at an elevation of 5 feet above finished floor or field routed to avoid interferences, with Contractor representative’s approval. Thermostats shall have a temperature range of at least 40 to 100°F, with closure of contacts on temperature fall. Thermostats shall be capable of operating contactors described above.</p> <p>CN 233R1 deletes and takes precedence over CN 233 in its entirety.</p>
234	<p>Referenced drawing shows the cord reels (Hubbell HBL510232W) on the structural iron at nine locations. No elevations are given. Electrical boxes cannot be installed as shown, these need to be offset away from the structural iron for the box to be placed behind.</p> <p>Coordinate location of electrical cord reels with hose reel locations and 2” water service. Locate bottom of cord reel mounting plate approximately 7’-0” above finished floor elevation and offset from each hose reel. Typical of all locations. Use same wall reinforcement mounting details as for hose reels. Reference CN 221 / FCR-208 or see attached copies of CN 221 / FCR-208 details.</p> <p>The current plate attachment for the cord and hose reels is skip welding. However, the use of bolts and spring nuts is acceptable to secure the plate to the framework of the hose and cord reel attachments. Bolts shall be 3/8-inch diameter, minimum, and ASTM A307 or better. Four bolts (one in each corner) are to be installed per plate. In no case shall the plate only be used to support the hose or cord reels.</p> <p>Apply silicone sealant at all bolt hole locations in the plate prior to installation of the bolts to seal penetrations.</p>
235	<p>Reference INEEL Dwg 520054.</p> <p>The wall cleanout on the south end of the Decon Bay is adjacent to the wall. The pipe cleanout was positioned as far south as possible.</p> <p>The pipe cleanout protrudes out of the floor at approximately 2 inches away from the wall and an alternate finish is required.</p> <p>Cut the clean-out pipe between flush and 1 inch above the existing metal pipe sleeve. Install a socket cleanout adapter with a screw plug to cover. Fill annulus between the completed cleanout and metal pipe sleeve with silicone sealant.</p>
236	<p>Reference Contract N0. 9300 paragraph 7.5.7 Training Costs.</p> <p>BBWI shall reimburse the Subcontractor for additional training incurred.</p>

CN #	
237	<p>Reference SPC-1481, Section 9.2.</p> <p>The Vendor Data Schedule Items 240 and 274 have not been submitted.</p> <p>The Vendor Data Schedule for Items 240 and 274 (i.e., Electrical Wiring Diagrams and Training Outlines) is hereby changed from “Prior to Shipment” to “Prior to Installation” for Item 240 and from “Prior to Shipment” to “Prior to System Testing” for Item 274.</p>
238	<p>Reference SPC-1481, Section 9.2.</p> <p>The nameplate information for the items listed on the following two pages is acceptable.</p> <p>For all motors delete the requirements for the nameplate that require the following information:</p> <p>The service factor minimum and nominal full load efficiencies and the full load power factor.</p> <p>The nameplate shall designate the maximum number of starts and the required cooling period when a motor is started under conditions of (a) cold rotor and, (b) warm rotor (after running continuously at full load for a period of one [1] hour).</p>
239	<p>Reference INEEL Drawing 520053.</p> <p>Raw water supply line is shown at 8-feet. The electricians have mounted a couple of items at this elevation. It is acceptable to relocate the raw water supply line to an elevation of 9-feet.</p> <p>The hose reel on the “B” line that is farthest north has been affected by the door relocation and additional HEPA filter bank. The hose reel can be placed at 31’-6” from the centerline of the next hose reel south at the same elevation to alleviate any interferences. It is acceptable to relocate the northernmost hose reel on the “B” line to the dimension stated above.</p>
240	<p>Reference INEEL Drawing 520066.</p> <p>Door 17 was relocated in CN 175R1 and Door 13 was not. The controls for door 17 are shown on the south side. There is approximately 6” between the two doors with the relocation.</p> <p>Relocate the controls for door 17 to the north side of the door.</p>
241	<p>BBWI directed S/C to accelerate work on 8/22/02. BBWI agrees to compensate the Subcontractor for 80 hrs of premium pay.</p>
242	<p>Reference INEEL Drawing 520035 and 520040.</p> <p>3-Line wall shown on A-1 print and wall key is shown as installing a 6" stud. However, Detail J on Drawing A-6 shows wall stopping at the bottom of the structural. The structural member is only 6" wide, if built to this elevation. Not only does the structural remain exposed, but so does the sheetrock and hat channel. USA drawings also show the liner stopping at the bottom of the structural.</p> <p>Install 6-inch studs as indicated on the drawing and extend finished wall to the ceiling, covering the structural iron. Butt metal liner panel to wall finish and provide continuous joint sealant, in accordance with SPC-1485, between the wall liner panels and the ceiling liner panels.</p>
243	<p>Currently Contract No. 9300 does not require shipment of HEPA filters to DOE-approved Filter Test Facility (FTF).</p> <p>The Subcontractor shall provide the following:</p> <p>Per DOE-STD-3020-97, each HEPA filter shall be tested at a DOE FTF prior to installation at a DOE site. Acceptance is contingent upon satisfactory completion of inspections and tests specified in DOE Standards.</p>
244	<p>Reference INEEL Drawing 520065 and SPC-1485, Section 16109</p> <p>Subcontractor cannot find an HBL201232W cord reel per specification. Subcontractor states that an HBL501232W is available. Also, the drawing states a HBL510232W is to be used.</p> <p>Subcontractor shall provide and install cord reels HBL501232W.</p>
245	<p>Reference INEEL Drawing 520059.</p> <p>Mezzanine heaters and louver are to be positioned over the fire riser room at an elevation of 12’. HTR-YDJ-21 will block access to mezzanine if installed above fire riser room.</p> <p>The louver/filter assembly and HTR-YDJ-22 are to be placed over the fire riser room per drawing. HTR-YDJ-21 shall be relocated along the south wall as required to allow for access to the mezzanine. Ensure adequate access is available to the electrical wiring and other equipment.</p>
246	<p>Reference INEEL Drawing 520068.</p> <p>The switch for the mezzanine lights is located on the north side of the mezzanine. S/C suggests relocating switch closer to the mezzanine access point and on the south wall.</p> <p>Relocate the mezzanine light switch to the south wall on the east side of the mezzanine adjacent to the access point.</p>
247	<p>Reference INEEL Drawing 520053.</p> <p>Referenced drawing shows the 2” water line on the east wall fastened to the wall with a unistrut support per Detail 2. The plan view on the same drawing shows the 2” raw water line on the west side of the beam face.</p> <p>Attach the 2” water line to the east wall as indicated in Detail 2 except the unistrut shall be sized to span between 2 girts. Unistrut is to be placed on top of the liner panels. It is acceptable to use self-tapping screws in lieu of the toggle bolts. Apply silicone between the liner panel, unistrut, and each screw to seal penetration. Field route the 2” pipe around the structural members to alleviate interference.</p> <p>The Subcontractor shall submit letter from building manufacturer stating attachment detail is acceptable.</p>



CN #	
248	<p>Reference INEEL Drawings 520053 and 520056.</p> <p>The raw water piping above the south overhead door is to be supported per the detail on Drawing 520056. Due to the slope of the roof, this detail cannot be achieved.</p> <p>Remove requirement to hang pipe per the typical pipe hanger on Drawing 520056. Route piping along wall over the top of the overhead door and use attachment detail specified in CN 247.</p>
249	<p>Power Management work package issues delayed work regarding a portion of CN 48R3. Particularly the pulling of the 15 kv feeder cables from (Sub 2) to the sectionalizer switch. Two additional walkdowns involving the Subcontractor occurred due to Power Management’s internal problems with LO/TO requirements. Subcontractor equipment was staged for work in front of (Sub 2) as scheduled; however, schedule demands required for another project forced the equipment and manpower to be relocated. Subcontractor has incurred equipment and labor costs due to Power Management delays.</p> <p>BBWI shall reimburse the Subcontractor for costs incurred.</p>
250	<p>The ICDF Complex perimeter chain-link fence has been installed next to CPP-1689 Administrative Office Trailer (AOT). A portion of the fence and tie-back posts are in an area, which remained to be paved. The Stoller Corporation also mobilized a double-wide trailer 5 feet west of the AOT parking lot. The fence and Stoller trailer modified the paving in these areas from machine lay to hand placed. The Subcontractor incurred additional labor costs.</p> <p>BBWI shall reimburse the Subcontractor for additional labor costs due to differing site conditions.</p>
251	<p>Reference INEEL Dwg. 520006 C-2.</p> <p>BBWI shall reimburse the Subcontractor for relocating the remaining topsoil and (gravel/silt material) previously staged in the temporary clearing and grubbing stockpile.</p>
252	<p>Reference Contract N0. 9300 paragraph 7.5.7 Training Costs</p> <p>Subcontractor has incurred added costs for mandatory training. Orange card – Gert – LO/TO refresher. Subcontractor shall provide objective evidence that training was received by the individual(s) performing work on Contract 9300. BBWI shall then reimburse the Subcontractor for additional training incurred.</p>
253	<p>Reference INEEL Drawing 520087 and 520088.</p> <p>The red rotating light and sign shown on the referenced drawings does not show elevations and is shown on the west side of the entry door. Subcontractor suggests moving the light over to the east side of the door on the outside of the canopy. Subcontractor feels this will provide for better visibility and be less likely to damage the light from the door opening.</p> <p>Subcontract shall mount the red rotating warning light to the east side of the door and out from under the canopy. Mount the light between 6 and 8 feet above final grade. Field locate the “Caution” sign as depicted on the referenced drawing.</p>
254	<p>It is highly desirable to switch from Temporary Power to Permanent Power as soon as reasonably achievable. BBWI is hereby directing the Subcontractor to accelerate the installation and final connection of permanent power from B21-620 (Sub 2) to the SSSTF project. Temporary Power disconnection from currently energized ICDF and SSSTF equipment/facilities shall be accomplished as outlined in the attached (ICDF Complex Operations and SSSTF Construction PBIA); see section H.1. Approval to switch from Temporary Power to Permanent Power is likely to be on a weekend with the earliest possible dates being Sept 5, 6, and 7. Accordingly, all efforts to reconnect energized items from Temporary Power to Permanent Power shall be performed to the fullest extent possible to support these projected September dates. These items currently energized include CPP-1689 (AOT), truck scales, sanitary sewer, head bolt heaters, RadCon trailer and cables installed in MH 496, which power the ICDF crest pad buildings (CPP-1799 and CPP-1798).</p> <p>No time extension shall be allowed. However BBWI will pay Premium Time to make all arrangements to support weekend connections.</p>
255	<p>Reference INEEL Drawing 520060.</p> <p>The referenced drawing shows exterior flashing on the 18” and 20” ducts. Specifications regarding the size, gauge, or type of metal is not given.</p> <p>Flashing is to be a two-piece unit that is sized such that a minimum of 6 in. of material is between the duct and the edge of the flashing. The finished shape of the flashing will be a rectangle around both ducts. Each piece is to be 24-gauge SST with a ½” kicker around edge. Attach the flashing to the side of the building and overlap the left- and right-hand pieces in the middle with #10 self-tapping screws. Fill behind flashing in the low spots of the siding with filler (i.e., foam) and seal with silicone around edges, between flashing plates, and between the flashing and the two ducts.</p>
256	<p>Reference SPC-1485, Sections 9900 and 13911.</p> <p>Paint specification states that all exposed firewater piping shall be painted as opposed to intermittent color bands. Fire Protection specification states that galvanized piping need not be painted but shall be labeled.</p> <p>The requirements as specified in Section 13911 are correct. All painting and labeling of pipe, fittings, hangers, and devices shall be in accordance with Section 9900. One exception is that galvanized piping need not be painted but is to be labeled in accordance with Section 9900.</p>
257	<p>Reference SPC-1485, sections 2703, 2722, and 2732.</p> <p>Under submittals, the following is required: “A Contractor’s Material and Test Certificate for Underground Piping” shall be completed and accepted for each major portion of the work covered by this specification prior to final acceptance of the installation.”</p> <p>This certification is to be completed by the Subcontractor. In lieu of the Contractor’s Material and Test Certificate, the Subcontractor shall fill out the attached Certificate of Conformance for each system to certify that the Subcontractor has installed the system per the specifications and drawings. Any variances to the specification and drawings need to be recorded on this form. Submittal numbers (VDS item 297 for Section 2722 and VDS item 298 for Section 2732) have been added to the required certification submittals.</p> <p>The requirement for submitting The Contractor’s Material and Test Certificate for Underground Piping per CN 195R2 is hereby deleted from CN 195R2. The Subcontractor shall use The Certificate of Conformance as described above.</p>

CN #	
258	<p>Reference SPC-1485, Section 8700 and INEEL Drawing 520041.</p> <p>Door 6 is identified as a Type “A” door with hardware group 6. Note 2 on the referenced drawing indicates that the door should have a louver like a type “C” door and the specification only has 5 hardware groups.</p> <p>The door shall be a Type “C” door with the louver.</p> <p>The hardware required for this shall be as followed:</p> <p>3 hinges – Part #: T4A3786 4.5 × 4.5 by McKinney Mfg. Co.</p> <p>1 storeroom lock – Part #: 93K7D 15D by Best Locks</p> <p>1 kickplate – 12 × 2” LDW by Rockwood</p> <p>1 wall stop – Part #: 406 by Rockwood</p>
259	<p>Reference INEEL Drawing 520041.</p> <p>Referenced drawing shows that the bases are to be epoxy. Paint schedule was changed to allow for acrylic paint in the restroom and shower areas.</p> <p>The Subcontractor shall, for rooms 103, 104, 105, 106, 107, 108, 109, 114, and 115, in lieu of the epoxy base called out in the drawings, use a standard 6” coved rubber base. The color is to be dark gray.</p>
260	<p>Reference INEEL SPC-1485, Section 9900.</p> <p>In order to facilitate the closure of Change Notice 210, it is desirable to delete item #1 from CN 210 and address this scope of work on CN 260, as described below.</p> <p>Roof purlins will not require paint, however (BBWI expects a credit back for a reduction in scope) exposed structural steel at walls will require paint finish, i.e., all exposed areas of the structural steel building frames, specifically the tapered legs in the Decon Area and Treatment Area need to receive paint finish per the Specification Section 09900, 5 of 11 Paint Schedule (Interior) Ferrous Metal. Color shall be light gray.</p> <p>CN 260 takes precedence over and henceforth deletes item #1 from CN 210.</p>
261	<p>Reference INEEL Drawing 520085 (E-24).</p> <p>The cable tray runs from the mezzanine to the 3-line wall and is located above the restroom areas. This area is no longer accessible. Article 392.6(H) and (I) of the NEC requires that cable tray be accessible and sufficient space be maintained for installation and maintenance of the cables.</p> <p>Subcontractor shall relocate cable tray to the east such that the cable tray will be accessible from the suspended ceiling in the hallways. Also, it is acceptable to route telecommunication cables through conduit directly to the communications backboard in lieu of using the cable tray as required for ease of installation. Redline drawings are to reflect as-built condition of cable runs from voice outlets to communications backboard.</p>
262	<p>Reference SPC-1485, Section 9900.</p> <p>The contaminated equipment pad calls out for Sika Top 155. However, the application of Sikadur 55 SLV to the horizontal surfaces of the contaminated equipment storage pad is acceptable. The vertical surfaces are to be coated with SikaTop 144 as specified. Install in accordance with manufacturer’s recommendations.</p> <p>Submit the required product data through the Vendor data system.</p>
263	<p>Reference SPC-1485, Section 02513.</p> <p>On 8/11/03, Desert Sage was directed to saw cut a longitudinal asphalt paving joint, prior to placing the next strip on Sequoia Street, inside of INTEC. Desert Sage proceeded to perform the saw cut under protest. After approximately 1 hour, BBWI directed the Subcontractor to cease saw cutting and apply a tack coat.</p> <p>BBWI shall reimburse the Subcontractor for costs associated concerning the misdirection, based on BBWI QA inspector’s misinterpretation of the specifications.</p>
264	<p>Reference SPC-1485, Section 16110 and INEEL Drawing 520068.</p> <p>Referenced spec states, “where required to be weather proof, small junction boxes to be die-cast aluminum rated for wet locations.” The boxes mounted to the ceiling in rooms 111 and 112 support pendant type fixtures.</p> <p>Due to a recent failure of a similar installation at the CFA Big Shop, the Subcontractor shall submit vendor data information on the proposed box. The vendor data shall demonstrate that the box is suitable to support pendant type fixtures. The vendor data shall also include the weight of the fixture and pendant assembly. If the vendor data is approved and these requirements are met, the Subcontractor will be allowed to use 4-inch square, stamped, one-piece boxes on the ceilings in these rooms to support the pendant type fixtures.</p>
265	<p>Reference INEEL Drawing 520067.</p> <p>Currently, due to conduit and equipment interferences there is not enough ceiling space to install the three light fixtures specified in room 101. Therefore the Subcontractor shall delete the west light fixture in room 101.</p>
266	<p>Reference SPC-1481, Section 16120 and INEEL Drawing 520062.</p> <p>The referenced spec section indicates the type of splicing material to be used. Notes on Drawing 520062 indicated where to make the splices and size of wire to be spliced. Splices are to be insulated using a “Scotchcast Power Cable Splice.” However, 3M does not manufacture a “Scotchcast” splice kit to insulate the indicated wire sizes.</p> <p>Therefore the Subcontractor shall use a 3M “Skotch-Kote,” with plastic and rubber tape in accordance with NEC for the referenced splice.</p>

CN #	
267	<p>Reference INEEL Drawing 520053 (P-2) and 520061(HV-4).</p> <p>The raw water backflow prevention valve and adjacent piping needs additional support. The Subcontractor shall provide a floor mounted pipe support that is secured to the floor with epoxy adhesive. The pipe saddle shall be anchored to the pipe with a 2-inch u-bolt. The pipe support shall be a Grinnel (as shown on Drawing HV-4) or equivalent. The pipe support shall be located such that the pipe is cradled between the backflow prevention valve and the elbow north of the valve (see Drawing P-2). The epoxy adhesive shall be Devcon High Performance epoxy adhesive or equivalent.</p>
268	<p>Reference INEEL Drawing 520066 (E-5) and SPC-1481, page 20 line 5.</p> <p>SPC-1481 states MCC is to be housed in a NEMA 12 enclosure. SSSTF Drawing E-5 note 8 states that "All equipment in damp areas, including shower rooms, change room, decon bay and treatment area shall be NEMA 3R."</p> <p>Type 12 enclosures are intended for use indoors to potect the enclosed equipment against fibers, flyings, lint, dust and dirt, and light splashing, seepage, dripping and external condensation of not-corrosive liquids. This will provide as good or better protection as the Type 3R enclosure. The Type 12 enclosure is acceptable.</p>
268R1	<p>Reference INEEL Drawing 520066 (E-5) and SPC-1481, page 20 line 5.</p> <p>Reference INEEL VDR-66368 (Easy Blend Batching System) and INEEL VDR-49629 (Mixer System).</p> <p>SPC-1481 states MCC is to be housed in a NEMA 12 enclosure. SSSTF Drawing E-5 note 8 states that "All equipment in damp areas, including shower rooms, change room, decon bay and treatment area shall be NEMA 3R."</p> <p>Type 12 enclosures are intended for use indoors to protect the enclosed equipment against fibers, flyings, lint, dust and dirt, and light splashing, seepage, dripping and external condensation of non-corrosive liquids. This will provide as good or better protection as the Type 3R enclosure. The Type 12 enclosure is acceptable for all Soil Stabilization System equipment enclosures. Therefore all enclosures are to be NEMA 12.</p> <p>CN 268R1 takes precedence over and deletes CN 268 in its entirety.</p>
269	<p>Reference SPC-1485, Section 02713.</p> <p>Raw water piping to SSSTF is a 2" line supplied from a 6" main. SPC-1485 states that "underground mains and lead-in connections shall be flushed thoroughly immediately after tie-in to system is made."</p> <p>The 6" main for the raw water that supplies SSSTF also supplies three 2" hose bibs at the ICDF. The main was flushed prior to turnover of the ICDF for operations by opening all three of of the ICDF hose bibs and flushing according to procedure. Therefore, flushing of the main is not required. The Subcontractor shall flush the 2" SSSTF raw water line according to above-ground flushing procedures.</p>
270	<p>Reference SPC-1481, Section 4.10 (Service Requirements).</p> <p>SPC-1481 requires that BBWI provide a drawing to show tie-in locations for building systems to the treatment equipment.</p> <p>The Subcontractor shall provide the raw water tie-in for the treatment equipment in the location shown on the attached sketch. The supply line shall be capped at the tie-in location until the equipment is installed.</p>
271	<p>Reference INEEL SPC-1485, Section 16123.</p> <p>Reference INEEL sketch (FCN 119 rev 1, sketch 1 of 2) as-built from INEEL drawing 520021 (U-13).</p> <p>Reference INEEL sketch (FCN 78, sketch 2 of 3) as-built from INEEL drawing 520022 (U-14).</p> <p>Reference SPC-1484 Drawing A-1.</p> <p>SSSTF is ready to begin connecting fiber optic communication cable to the ICDF network. The original plan for fiber installation of the ICDF and SSSTF was modified by BBWI personnel, to allow ICDF to go operational ahead of the SSSTF.</p> <p>The Subcontractor shall install DX 24-0850-W 62.5/125 UM fiber optic cable from the SSSTF PLC patch panel to the AOT PLC patch panel. The fiber optic cable shall be pulled through an existing 4 × 2 duct bank, through the existing spare multi-cell raceway from HH 180 (southeast corner of AOT), to HH 181 located on the (southwest corner of CPP-1688 Decon Building). The fiber shall also be routed from HH 180 through existing 4 × 1 duct bank into CPP-1689 (AOT) communications room. The Subcontractor is allowed to terminate the fiber to any available slot in the AOT patch panel. Install and test fiber in accordance with SPC-1485 Section 16123 (Fiber Optic Cable Installation), with the following exceptions:</p> <p>Change SPC-1485 Section 16123 to read:</p> <p>Page 2 of 4 Lines 29 and 30 (MATERIALS) – The cables shall be DX 24-0850-W 62.5/125 UM</p> <p>Page 3 of 4 Lines 29 and 31 (FIBER OPTIC CABLE LOSS) – The loss for any of the optic fibers signal shall be 2 dB maximum.</p> <p>Page 4 of 4 Lines 20 through 26 (FIBER OPTIC TEST) – The Subcontractor shall perform a bi-directional fiber optic loss test at 850 and 1300nm for multi-mode fibers.</p> <p>Page 4 of 4 Lines 28 through 31 (OPTICAL LOSS TEST) – The Subcontractor shall perform a bi-directional fiber optic segment test...Maximum fiber segment loss shall be 2 dB. The test shall be performed at 850nm and 1300nm. This test form shall be submitted.</p>
272	<p>Reference INEEL Drawing 520048 (S-3) detail 5.</p> <p>The joint between the bottom of the post tension exterior slab and the top of the exterior drainage trench has been filled and finished with specified material which fragments and falls out after a few days. To alleviate this problem, the Subcontractor shall fill this area with Sika Flex 15LM.</p>
273	<p>Reference INEEL Drawing 520096 (LSS-3).</p> <p>The referenced drawing (LSS-3) does not show an automatic smoke detector (or heat detector) at the location of the FACP. NFPA 72 4.4.5 requires automatic smoke detection (or heat detection) at the location of the FACP in a facility that is not continuously occupied. The Subcontractor shall change the referenced drawing to include an automatic smoke detection device at the location of the FACP and the device shall be installed at the location of the FACP.</p>

CN #	
274	<p>Reference INEEL Drawings 520066 (E-5), 520067 (E-6), 520058 (HV-1), 520061 (HV-4) and 520087 (IN-1).</p> <p>Drawing E-6 note 2, states that conduit in the Decon bay and treatment room shall be exposed. Conduit in all other areas shall be concealed in the walls or above the ceiling. However, project drawings state that the thermostats are to be integral to the heaters; therefore the electrical Subcontractor did not install conduit within the walls.</p> <p>The Subcontractor shall install conduit, exposed as necessary in rooms 101, 102, 103, 108, 110, 111 and in the hall for the thermostats and OWS-YDJ-963 (Operating work station).</p>
275	<p>Reference INEEL drawings; SPC-1485, Section 16721, page 5 lines 1–3.</p> <p>The referenced specification calls for a duct smoke detector for the ventilation system. The Subcontractor shall not install the duct smoke detector in CPP-1688 (Decon Building).</p>
276	<p>Reference INEEL Drawing 520059 (HV-2).</p> <p>Drawing HV-2 shows a 2-foot offset of the blower fans for the HEPA filtration system. When installed according to manufacturer's requirements, there is not enough room on the existing concrete pad to allow for the 2-foot offset.</p> <p>The Subcontractor shall install the blower fans for the HEPA system in-line. The 2-foot offset shall be disregarded. If mounting bolts for the fan support structure are within three inches of the edge of the concrete slab, a new ½-inch hole shall be drilled in the mounting plate in order for the anchor bolt to be installed away from the edge.</p>
277	<p>Reference INEEL SPC-1485 Section 09510 and INEEL Drawing 520044 (A-10).</p> <p>The specified suspended ceiling grid and tile shall be installed in CPP-1688 (Decon Building), which will limit access to the mezzanine area. Access could be gained through ceiling tiles but the potential for damaging the tile and grid is extremely likely.</p> <p>The Subcontractor shall provide and install an access door within the acoustic tile grid system, east of the mezzanine swing gate, field located in the hallway (rm 105). A 36" × 24" door shall be installed which shall provide access up to the mezzanine, by use of an extension ladder supplied by others. Access door shall be one listed in attachment, or similar.</p>
278	<p>Reference INEEL Drawing 520035 (A-1), for plan view of treatment area room 112.</p> <p>The MCC shall be installed against 3-line, beginning with the large panel approximately 11-feet from the west end and ending with the final panel at the west end. The MCCs shall be placed sequentially. The cord reel, thermostat, disconnects and related conduit shall be field-located to the east of MCC panel 1 along 3-line, in compliance with the electrical codes referenced within SPC-1485.</p> <p>Existing cord reel frame shall be abandoned and covered over by fastening metal flat stock to the existing J-trim frame, or by an alternate method, which shall be approved by the Contractor's Representative. Subcontractor shall reuse cord reel backing plate in new mounting location. Provide and apply sealant around abandoned cord reel frame, concurrent with the approved metal building sealant. Due to relocating electrical components, all remaining penetrations in 3-line shall be patched and sealed as typical in CPP-1688 room 112 (Treatment Area).</p>
279	<p>Reference INEEL Drawings 520006 and 520009.</p> <p>Reference attached sketches 1 of 3, 2 of 3, and 3 of 3.</p> <p>Reference SPC-1485 Section 02486—REVEGETAION.</p> <p>Drawing 520006 (C-2) notes 2 and 4 state to remove existing road after work is complete. The Subcontractor shall leave the remaining portions of the existing road (see sketch 1 of 3)</p> <p>Drawing 520006 (C-2) note 10 states that all exposed slopes are to be reseeded. The Subcontractor shall not reseed portions of Aspen Avenue's south slope (see sketch 1 of 3).</p> <p>Drawing 520006 (C-2). The Subcontractor shall not reseed the east contour slope of the SSSTF project, adjacent to the SSSTF perimeter fence (see sketch 1 of 3).</p> <p>Drawing 520006 (C-2) note 10 states to reseed Area 1. The Subcontractor shall not reseed Area 1 (see sketch 1 of 3).</p> <p>Drawing 520006 (C-2) note 10 states all disturbed areas are to be reseeded. Subcontractor shall not reseed Area 3 (see sketch 1 of 3).</p> <p>Drawing 520006 (Topsoil Stockpile). Topsoil stockpile was expanded in CN 20. The Subcontractor shall reseed the entire topsoil stockpile area (see sketch 3 of 3).</p> <p>(DCN 3) Sketch 1 of 19 as built from Drawing 520009 (U-1) depicts an area north of Aspen Avenue to Substation B21-620 (Sub 2). The Subcontractor shall scarify and reseed the disturbed area between sub 2 and Aspen Avenue (see sketch 2 of 3).</p> <p>For revegetation requirements, the Subcontractor shall follow SPC-1485 Section 02486.</p>
280	<p>Reference INEEL Drawing 520061 (HV-4) detail 2.</p> <p>Currently an adjustable pipe saddle support (Grinnell) is to be threaded onto a 6-inch Schedule 40 pipe which will support ducting upstream of the west HEPA filters. The Subcontractor has suggested welding a 6-inch thread coupler to the 6-inch pipe, reference (SFP 302). For the Subcontractor's convenience, BBWI hereby allows the Subcontractor to procure and weld in place a 6-inch thread coupler to each of the 6-inch schedule 40 support pipes.</p> <p>Reference INEEL Drawings 520060 (HV-3) and 520061 (HV-4) detail 2.</p> <p>Per the referenced drawings, the ducting support is specified to be held in place with two bolts embedded 3.5 inches into the slab. The Subcontractor has requested to use 2-inch embeds to protect the post-tension rods, reference (SFP 302). BBWI hereby allows the Subcontractor to install expansion anchors up to a 2-inch embedment depth, into the exterior slab for ducting support.</p> <p>Reference INEEL Drawing 520059 (HV-2) and SPC-1485 Section 15016.</p> <p>Two 7.5-inch duct pieces must be positioned between the west HEPA filters and fans YDJ-3 and YDJ-4. The duct pieces fit between the filter housings, flowstations and manual damper. These short duct pieces are required to be pressure tested. The Subcontractor has requested an in-service test for the above-described duct pieces, reference SFP (303). For the Subcontractor's convenience, BBWI shall delete the requirement to pressure test the two short duct pieces. Because the duct pieces are located on the upstream side of the HEPA housings, leakage is not an issue.</p>

CN #	
280 (cont.)	<p>Reference the attached CN 280 Sketch 1 and CN 199R4.</p> <p>Currently backdraft dampers are required to be installed in the 18 and 20-inch diameter exhaust ducts downstream of all branch take-offs and upstream of the west wall of CPP-1688 (Decon Building). CN 199R4 did not provide sufficient backdraft weld detail. Therefore the Subcontractor shall weld the backdraft dampers to the duct transition piece as shown on the attached CN 280 sketch 1. The weld leg size shall equal the gauge of the damper flange and have a minimum length of 1/2 inch. Welding shall be sequenced to minimize flange distortion.</p>
281	<p>Reference INEEL Drawings 520066 (E-5) and 520067 (E-6).</p> <p>Reference SPC-1481.</p> <p>After the installation of the Essex Box Tipper, BBWI has observed much interference associated with the placement of the Box Tipper. In order to erect the unit, the Subcontractor has removed three light fixtures from the ceiling. In order to comply with NEC code requirements, several more electrical components must be relocated and or deleted.</p> <p>The Subcontractor’s Soil Stabilization System (SSS) equipment, per Procurement Specification (1481), has impacted the design of CPP-1688 (Decon Building).</p> <p>The Subcontractor shall raise three light fixtures located immediately west of the box tipper transition hood, up to a height as near to the liner panel ceiling as is permissible per NEC.</p> <p>The Subcontractor shall delete three light fixtures located immediately above the box tipper, nearest to B-line. Remove existing j-boxes and conduit associated with the deleted lights to a point near 4-line, which is conducive in allowing proper termination of the conduit run.</p> <p>The Subcontractor shall remove heaters (HTR-YDJ-7) and (HTR-YDJ-23), due to box tipper interference.</p> <p><b>NOTE:</b> Contractor may relocate heaters and lights at a later date.</p> <p>Conduit and wire associated with (HTR-YDJ-7) and (HTR-YDJ-23) shall be removed from liner panel on 5-line, and terminated back to the disconnect located on west end of 5-line. The disconnects associated with (HTR-YDJ-7) and (HTR-YDJ-23) shall remain in their current locations. The thermostat associated with (HTR-YDJ-7 and HTR-YDJ-23) also controls (HTR-YDJ-10 and HTR-YDJ-11), therefore the thermostat and conduit shall be field located near personnel door 14, for better accessibility and functionality. Before installation of the thermostat, the Subcontractor shall verify final location with the Contractor’s Representative.</p>
282	<p>Reference VDS# 243 / VDR# 47535 and Wheelabrator Drawing #203D1004-B.</p> <p>Reference SPC-1481 Section 7.3.</p> <p>Reference PRD-5010.</p> <p>Currently SPC-1481 Section 7.3 states, “This specific design does not allow for welding or welding repairs at the INEEL. However, if the Subcontractor determines that welding is required, the Contractor’s approval must be obtained prior to performance of any welding.”</p> <p>In order to allow the Subcontractor to perform on-site welding on the SSS equipment, all on-site welding shall be performed in accordance with the INEEL welding manual. Welding shall be performed through specific codes established by the Subcontractor for welding of the SSS equipment. These specific codes shall be used to ensure that the appropriate weld procedures are used. All welds are to be documented on weld record packages, in accordance with the Subcontractor’s Requirements Manual, PRD 5010. The Contractor’s Representative shall inspect all welding per established codes. Welders shall be qualified at the INEEL Welding Test Facility.</p>
283	<p>(1) The attached INEEL Drawing 520069 has modified, PCC-YDJ-312, PCC-YDJ-49, PCC-YDJ-300, and LP-YDJ-104. The Subcontractor shall procure and install PCC-YDJ-300 per the attached panel schedule.</p> <p>(2) INEEL Drawing 520062 depicts medium voltage cable routed into Block 21 CPP-620 (Substation 2), and terminating at cubicle B513. This is incorrect. The medium voltage cable is terminated at cubicle B515, and shall be redlined on the applicable drawings.</p> <p>(3) The information contained in SFP 286R1 clarification, issued to the Subcontractor on 9/24/03, is hereby incorporated into CN 283. This information must be contained in a CN in order to incorporate it into the contract drawings.</p>
284	<p>Reference INEEL Drawing 520058 (HV-1).</p> <p>The referenced drawing indicates that heaters HTR-YDJ-24 and 25 are controlled by a humidistat. Note 7 states “ Electric duct heaters HTR-YDJ-24 and HTR-YDJ-25 shall operate upon humidistat sensing 90% R.H. or greater”. No current design or drawings indicate how the humidistats are to be connected to the heater control.</p> <p>The Subcontractor shall procure and install the following:</p> <p>The disconnect for each of the heaters noted shall be replaced by a combination fused disconnect/contactor with a control transformer. The control transformer primary shall be 480 volts; the secondary shall match the requirements of the humidistat. The disconnect shall be a fusible disconnect with 30 amp fuses and have a NEMA 4 enclosure (Type SCW14S8 [Square D]). Route a 3/4" C with 3#12 (1EG) from each humidistat to its associated contactor. The contactor shall be a Class 9070 Type T100 NEMA controller. Wiring and conduit shall be re-routed to the combination disconnect/contactor. The changes shall be completed for each of the heaters noted above.</p>
284R1	<p>Reference INEEL Drawing 520058 (HV-1).</p> <p>The referenced drawing indicates that heaters HTR-YDJ-24 and 25 are controlled by a humidistat. Note 7 states “ Electric duct heaters HTR-YDJ-24 and HTR-YDJ-25 shall operate upon humidistat sensing 90% R.H. or greater.” No current design or drawings indicate how the humidistats are to be connected to the heater control.</p> <p>The Subcontractor shall procure and install the following:</p> <p>The disconnect for each of the heaters noted shall be replaced by a combination fused disconnect/contactor with a control transformer. The control transformer primary shall be 480 volts; the secondary shall match the requirements of the humidistat. The disconnect shall be a fusible disconnect with 30 amp fuses and have a NEMA 3R enclosure (Type SCW14S8 [Square D]). Route a 3/4" C with 3#12 (1EG) from each humidistat to its associated contactor. The contactor shall be a Class 9070 Type T100 NEMA controller. Wiring and conduit shall be re-routed to the combination disconnect/contactor. The changes shall be completed for each of the heaters noted above.</p>

CN #	
285	<p>Reference INEEL SPC-1485, and Procurement SPC-1484.</p> <p>Currently, the Stoller trailer is energized from the temporary disconnect DWS-YDJ-152 and routed above ground, through the top of MH 494, into an existing duct bank, and connected to the Stoller office trailer transformer. It is highly desirable to re-route this temporary SO cable away from MH 494. Subcontractor shall reroute the current SO cable configuration. SO cable shall be installed beginning at DWS-YDJ-152, and configured in the most direct route, above ground to the Stoller office trailer transformer, bi-passing MH 494.</p> <p>Currently the ICDF Complex is operating weekly, Monday through Thursday. It is highly desirable to energize CPP-1688 (Decon Building). Therefore, the Subcontractor shall perform all work necessary to energize CPP-1688 on 11.21.03, in order not to adversely impact ICDF Complex Operations.</p> <p>Currently CPP-1689 (AOT) heat tape system is non-conforming per NFPA 70. The Subcontractor shall perform all work necessary to bring the heat tape system up to code, which includes installing a GFEP breaker into LP-YDJ-57.</p> <p>All work described on CN 285 shall be performed on 11.21.03. All ICDF/SSSTF systems shall be fully operational by 7:00 a.m. on 11.24.03.</p>
286	<p>Reference INEEL Drawings 520089 (IN-3) and 520058 (HV-1).</p> <p>Due to the Subcontractor not procuring the Anderson-Greenwood Manifold Model M24T-V-1-5-4 in a timely manner, the Subcontractor has informally requested an equivalent product. The Anderson-Greenwood model is an exceptionally long-lead item.</p> <p>The Subcontractor shall procure and install HOKE Pentafold 5-valve manifold model 851211F8Y2, in lieu of Anderson-Greenwood Manifolds. The hi and low pressure tubing shall be removed from the delta pressure switches on the top of the HEPA bank and routed to the hi and low taps for the HOKE Pentafold 5-valve manifold. The delta pressure switches’ hi and low ports shall be capped. The Subcontractor shall procure and install the parts listed below.</p> <p>(1) 8 – ¼-inch Swagelok tees</p> <p>(2) 8 – ¼-inch by 3/8-inch compression adapters</p> <p>(3) 12 – ¼-inch tubing caps.</p>
287	<p>Reference INEEL Drawing (FCN 176/ CN 199R4 Sketch 2) modified from INEEL Drawing 520066.</p> <p>Reference INEEL drawing (as-built in progress as of 10/21/03 per CN 283) modified from INEEL drawing 520069.</p> <p>SPC-1485, Section 16195 “Electrical Identification.”</p> <p>Disconnects in CPP-1688 rooms 103, 106 and 108 are physically located in such a way as to violate NEC ARTICLE 110.26 (A) Working Space. The workspace access requirements apply to working on energized equipment. The only time disconnects are required to be open, are to change out fuses. Therefore, the disconnects shall be de-energized prior to opening.</p> <p>All referenced disconnect caution labels will be provided to the Subcontractor GFE. All referenced phenolic labels shall have white lettering with a red background. Label height shall be at a minimum 1-inch. Lettering height (first line) shall be 3/8-inch. Lettering height (second line) shall be ¼ inch.</p> <p>The Subcontractor shall place a phenolic label on the face of the disconnect in CPP-1688 room 103 (women’s shower/locker room), worded as such:</p> <p>CAUTION</p> <p>POWER IS SUPPLIED FROM</p> <p>PANEL LP-YDJ-312, CKT16,18</p> <p>DE-ENERGIZE CKT16,18 PRIOR TO OPENING</p> <p>The Subcontractor shall place a phenolic label on the face of the disconnect in CPP-1688 room 108 (men’s shower/locker room), worded as such:</p> <p>CAUTION</p> <p>POWER IS SUPPLIED FROM</p> <p>PANEL LP-YDJ-312, CKT 15,17</p> <p>DE-ENERGIZE CKT 15,17 PRIOR TO OPENING</p> <p>The Subcontractor shall place a phenolic label on the face of the disconnect in CPP-1688 room 106 (janitor’s room), worded as such:</p> <p>CAUTION</p> <p>POWER IS SUPPLIED FROM</p> <p>PANEL LP-YDJ-312, CKT 12,14</p> <p>DE-ENERGIZE CKT 12,14 PRIOR TO OPENING</p>

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288	<p>Reference INEEL Drawing 520031 (U-23).</p> <p>Currently pump levels for MAH-YDJ-SW-498 are set to high. At these current levels, the water will be above the penetration in the fiberglass vault before the pump operates. The current settings and elevations are as follows:</p> <p>MAH-YDJ-SW-498: Discharge invert 4911.5</p> <p>First Pump On 4911.5</p> <p>Second Pump On 4911.8</p> <p>Pumps off 4908.0</p> <p>Bottom 4907.0</p> <p>The level setpoints shall be changed to the following values:</p> <p>MAH-YDJ-SW-498: ( As-built dimensions are Discharge invert =4911.5, bottom = 4907.0)</p> <p>Low Level Alarm 4907.5</p> <p>First Pump On 4910.0</p> <p>Second Pump On 4910.8</p> <p>Both Pumps Off 4908.0</p> <p>High Level Alarm 4911.0</p>
289	<p>Reference INEEL Drawing 520053 (P-2).</p> <p>The Subcontractor shall procure and install spray nozzles on the 3/4-inch hoses associated with the six hose reels in CPP-1688 (Decon Building). The spray nozzles shall be part number BWSG in the attached catalog page or equivalent. The hose connector for the nozzle shall be part number BNS64 in the attached catalog page or equivalent. The hose connectors shall be secured to the end of the hoses using standard crimp ring clamps.</p>
290	<p>Reference INEEL Drawing 520006 (C-2) and CN 279.</p> <p>SPC-1485 Section 02486-REVEGETATION.</p> <p>As of 12/01/03, the Subcontractor has not completed revegetation of the SSSTF, per directions stated in CN 279. Per the referenced documents, the seeding shall be done between October 10 and November 30.</p> <p>Based on forecasted weather conditions, CN 290 hereby extends the revegetation completion date from November 30 to December 15. Revegetation must still be performed in accordance with referenced documents.</p>
291	<p>Reference INEEL Drawings 520066 (E-5) and 520067 (E-6).</p> <p>Reference SPC-1481.</p> <p>Reference CN 281.</p> <p>The Subcontractor's Soil Stabilization System (SSS) equipment, per Procurement Specification (1481), has impacted heater placements in room 112 of CPP-1688 (Decon Building).</p> <p>In order to accommodate the Subcontractor's SSS equipment placements, the Subcontractor shall relocate HTR-YDJ-8 and HTR-YDJ-11. The referenced heaters shall be mounted from the metal building rafter on the west half of 4-line, via beam clamps. The referenced heaters shall be oriented length ways with the rafter, and field located along the rafter to avoid interferences associated with equipment, overhead doors etc.</p> <p>Previously mounted disconnects, conduit and wiring associated with heaters (HTR-YDJ-7, HTR-YDJ-23 and HTR-YDJ-10) may remain in place.</p> <p>The label(s) shall contain the following criteria:</p> <ol style="list-style-type: none"> <li>1. Properly assigned identifier.</li> <li>2. Noun name or function "DISCONNECT SWITCH"</li> <li>3. Power source "FED FROM: panel number, circuit number"</li> <li>4. "OUT OF SERVICE"</li> </ol> <p>The Subcontractor shall delete the installation of HTR-YDJ-7, HTR-YDJ-23 and HTR-YDJ-10.</p>
292	<ol style="list-style-type: none"> <li>1. Reference SPC-1485 Section 15883.</li> <li>2. Reference SPC-1485 Section 15480.</li> </ol> <ol style="list-style-type: none"> <li>1. Per SPC-1485 Section 15883 lines 25–29, “The in-place DOP test shall be performed by others....” Therefore VDS items 98 and 99 are hereby deleted from the vendor data schedule.</li> <li>2. Sterilization and Water Piping Test Reports shall be performed by BBWI personnel. Therefore VDS item #95 is hereby deleted from the vendor data schedule.</li> </ol>

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293	<p>Reference SPC-1485.</p> <p>Reference as-built INEEL Drawing 520069 (E-8) issued as an attachment to CN 283.</p> <p>Reference DOE-ID AE Standard, Section 1600-2.7.</p> <p>Electrical panels PCC-YDJ-300, LP-YDJ-312, and PCC-B21-49 as well as the 400-amp breaker (LC36400) do not have a positive lock-out mechanism. SPC-1485 does not call out the requirement, for breaker lock out mechanisms.</p> <p>The DOE-ID AE Standard Section 1600-2.7 states "Equipment or systems that have lockout devices as standard accessories shall be specified with those devices."</p> <p>The Subcontractor shall procure and install the following breaker lockout devices for the noted breaker panels.</p> <p>PCC-YDJ-300:</p> <ul style="list-style-type: none"> <li>(16) HPAFK breaker lockout devices</li> <li>(1) AHPAL1 main breaker device</li> </ul> <p>LP-YDJ-312:</p> <ul style="list-style-type: none"> <li>(21) QO1PA breaker lockout devices</li> <li>(5) QO1PL double pole breaker devices</li> </ul> <p>PCC-B21-49:</p> <ul style="list-style-type: none"> <li>(1) AHPAL1 600 amp breaker device</li> <li>(4) HPAFK F frame breaker devices</li> </ul> <p>(1) AHPAL1 (LC36400) 400 amp breaker device</p>
294	<p>Reference Besser drawing (PLC Input Controls), Drawing UAWA0783 sheet 4 of 14 rev. #1.</p> <p>Reference INEEL Drawing 520035 (A-1) for CPP-1688 door identification.</p> <p>Personnel door 12 requires a limit switch per the referenced Besser drawing. The Subcontractor is allowed to penetrate through 3-line, into CPP-1688 room 111, in order to field route and install conduit and wiring in support of the required limit switch, per the Besser drawing referenced above.</p>
295	<p>Reference INEEL Drawing FCN 176 sketch 2 modified from INEEL Drawing 520066 (E-5).</p> <p>Reference CFR 1910.212(a)(5) OSHA Instruction STD1-12.1.</p> <p>HTR-YDJ- 21 and HTR-YDJ-22 are currently installed above the pre-cast hollowcore mezzanine. However, the fan blades and heater coils are not adequately protected, and currently pose a safety risk to workers.</p> <p>For heaters referenced above, the Subcontractor shall install a 15-inch by 16-inch section of expanded metal, to function as a guard for the front of the heaters. The expanded metal shall be slid in place behind the louvers of each heater and fastened to the front of the heaters with sheet metal screws. Sheet metal screw location shall be field determined to avoid interferences. Expanded metal shall be typical as that used for the 18-inch exhaust duct (bird screen); reference Drawing HV-3. Expanded metal wire spacing shall be less than ½-inch in size.</p> <p>The Subcontractor shall fabricate and install a fan guard for each of the heaters, as depicted on the attached sketch. Expanded metal wire spacing requirements shall be the same as the front. Verify measurements prior to fabricating guards.</p> <p>The Subcontractor shall orient heaters in a direction that will not directly blow air on adjacent equipment. A hole shall be drilled into the swivel plates near the pivot bolt, and a locking bolt shall be inserted and tightened.</p>
296	<p>Reference CN 199R4</p> <p>Reference CN 283 as-built panel schedule modified from INEEL Drawing 520069 (E-8).</p> <p>Reference attached Sketch CN 296.</p> <p>Reference INEEL drawing 520058 (HV-1) for heated louver location.</p> <p>CN 199R4 allowed the Subcontractor to eliminate several louvers and replace them with one large heated louver. Conduit routing, wire, and breaker sizes were not denoted on CN 199R4.</p> <p>Subcontractor shall field route conduit from PCC-YDJ-300, into room 113, terminating in a junction box sized for the referenced cable. Junction box shall be installed on B-line approximately 4 feet south of 4-line interior panels, and approximately 2 feet below the top of the heated louver. At a minimum, conduit size shall be 3 inches. Red line project drawings to reflect conduit routing, etc.</p> <p>The Subcontractor shall procure and install 350 kcmil cables. Cables shall be tested in accordance with SPC-1485. The Subcontractor shall procure a 300-amp breaker compatible with PCC-YDJ-300. Breaker shall not be installed until direction from the Contractor is issued.</p>
297	<p>CN 268R1 states that all SSS equipment enclosures are to be NEMA 12. CN 297 modifies this requirement as follows:</p> <p>All electrical panels are required to be NEMA 12. The SSS equipment, supplied as commercial items, shall have their electrical components rated as specified by the manufacture of the item. Commercial items are identified as the mixer, cooksom door, air compressor, pressure washer, box tipper, dust collector equipment and bulk bag unloader. Any other items will be evaluated on a case-by-case basis.</p>



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298	<p>Reference SPC-1485 Section 16650.</p> <p>Reference INEEL drawing 520058 – 60 (HV 1-4).</p> <p>Reference NEC 404.4.</p> <p>Per project drawings, humidistats are to be installed in the 18-inch and 20-inch ducts upstream of the HEPA filter banks. The referenced specification states that the installation needs to be performed according to NEC, which requires weatherproof enclosures for the electrical humidistats. The humidistats (Invensys HC-201) shall be mounted in the 18" and 20" ducting using a NEMA 4 enclosure to provide weather protection for the switch mechanism.</p>
299	<p>Reference SPC-1481 Section 5.5.</p> <p>Reference VDS #239 and #240.</p> <p>The referenced VDS and specification depict a pendant control and festoon system. Due to the restricted operational area in CPP-1688 room 112, it is advantageous to delete the installation of the pendant and festoon system.</p> <p>The pendant and festoon system shall not be installed and shall be deleted from the design. A vendor data transmittal disposition form shall be submitted for VDS items #239 and #240 reflecting this change.</p>
300	<p>Reference SPC-1485 Section 16610 page 2 of 3, lines 44 and 45.</p> <p>Reference INEEL Drawing 520082 (E-21).</p> <p>Previously, the Contractor’s telecommunication group terminated all telephone cables inside HH 180. In order not to have to unfasten terminations for testing, the requirement for performing continuity testing for each conductor is hereby deleted. VDS items #114 and #117 are hereby deleted from the vendor data schedule.</p>
301	<p>Reference SPC-1481 Section 1.4.8.</p> <p>Reference SPC-1481 Section 7.2.</p> <p>SPC-1481 Section 7.2 states “The Contractor is also responsible for conducting the TCLP.” This requirement is hereby deleted from the referenced specification. Clean soils will be used during testing, thus eliminating the need for a standardized laboratory procedure.</p> <p>SPC-1481 Section 7.2 states that the Contractor is responsible for providing “aqueous liquid /sludge wastes, and reagents for the SO testing activities”. Liquid and sludge will not be used for SO testing activities and are hereby deleted from the referenced specification. The Contractor shall provide the reagent materials as stated in the referenced specification.</p>
302	<p>Reference CNs 55, 89, 214 and 284.</p> <p>The referenced CNs are considered canceled by the Contractor. The scope of work contained in the referenced CNs have not been performed, or modified via an alternate CN. Previously there has been no contractual document issued to the Subcontractor to delete these CNs from Subcontract 9300. CN 302 hereby cancels CN 55, 89, 214 and 284, in their entirety.</p> <p>Scope of CN 55: SFP 65 was returned to the Subcontractor as a clarification, after CN 55 had been issued to the Subcontractor. Therefore CN 55 was unnecessary, and not used.</p> <p>Scope of CN 89: WGS asked that the Subcontractor off load a large poly tank for the ICDF Complex. This work was never performed.</p> <p>Scope of CN 214: CN 214 was replaced by CN 230R1 (concrete bridges in exterior trench).</p> <p>Scope of CN 284: CN 284 was replaced with CN 284R1 allowing a NEMA 3r enclosure in lieu of NEMA 4.</p>
303	<p>Reference INEEL Drawing 520059 (HV-2).</p> <p>Currently, an 18-inch diameter duct penetrates through B-line, as indicated on the referenced drawing. The drawing does not depict an escutcheon around the duct.</p> <p>The Subcontractor shall install an escutcheon around the 18-inch duct on the east side of B-line. Escutcheon material and installation shall be typical of existing escutcheons installed on CPP-1688. Liner panel foam enclosures shall be used to seal between escutcheon and liner.</p>
304	<p>Reference NEC 110.34 (A).</p> <p>Two concrete barriers will be provided to the Subcontractor for installation in CPP-1688, room 112. The concrete protective barriers shall be positioned North of the MCC, Mixer Mind, and the Easy Blend control panel, as required to provide protection for the panels and insure code required working space.</p> <p>The protective barriers will be delivered to the Subcontractor’s painting sub tier, via Pocatello Precast. The protective barriers shall be prepared and painted in such a manner that the surface can be readily decontaminated. Preparation shall include power washing and the application of NU-KLAD 114 block filler. The barriers shall be painted with a yellow Accrashield paint. Vendor data is not required.</p> <p>The Subcontractor shall deliver the painted concrete barriers to CPP-1688, and positioned in their final configuration in room 112.</p>
305	<p>Reference VDS #88 – VDR #42970 Rev 2 (Dry pipe fire protection system – system layout)</p> <p>Reference NFPA 13-2002, Table 8.7.2.2.1.</p> <p>Reference NFPA 13-2002, Table 9.2.1.3.1.</p> <p>Currently, portions of CPP-1688 dry pipe system interfere with the functionality of the SSS equipment, namely the NBE Bulk Bag Unloader. The Subcontractor has also supported portions of the dry pipe system on overhead door rails. NFPA 13-2002, (Table 9.2.1.3.1) will not allow supporting of the dry pipe in this manner. To aid the Subcontractor in resolving this difficult SSS design problem, and to aid the Subcontractor in complying with NFPA, the Subcontractor shall delete the four, stand sidewall sprinklers, in room #112. In their place the Subcontractor shall install one Victaulic Model V2709 standard horizontal sidewall sprinkler for each overhead door (door #15 and #17). The sprinklers shall be installed in such a manner that the spray pattern will be from the south to the north of each door.</p>

CN #	
305 (cont.)	<p>The Subcontractor has also supported dry pipe from the overhead rails of overhead doors #1 and #18, in the Decon Bay (room #113). A Victaulic Model V2709 standard horizontal sidewall sprinkler shall be installed in lieu of the current dry pipe configuration, for each door, the same as room #112. The sprinklers shall be installed in such a manner that the spray pattern will be from the west to the east of each door.</p> <p>The Subcontractor has installed a dry pipeline above the Essex Box Tipper. The Box Tipper is interfering with adequate sprinkler coverage. In order to alleviate this problem the Subcontractor shall install a tee after the last sprinkler head above the Box Tipper near B-line. An additional sprinkler head will be installed preceding the north edge of the Box Tipper to protect the aisle below.</p> <p>The Subcontractor shall perform an in-service test. For all dry pipe modifications, apply 40 psi to dry pipe system and soap joints.</p> <p>All dry pipe alterations shall be identified on VDS #91 (As-built drawings).</p>
305R1	<p>Only paragraph #5 has been modified from the previous CN 305.</p> <p>Reference VDS #88 – VDR #42970 rev 2 (Dry pipe fire protection system – system layout).</p> <p>Reference NFPA 13-2002, Table 8.7.2.2.1.</p> <p>Reference NFPA 13-2002, Table 9.2.1.3.1.</p> <p>Currently, portions of CPP-1688 dry pipe system interfere with the functionality of the SSS equipment, namely the NBE Bulk Bag Unloader. The Subcontractor has also supported portions of the dry pipe system on overhead door rails. (NFPA 13-2002, Table 9.2.1.3.1), will not allow supporting of the dry pipe in this manner. To aid the Subcontractor in resolving this difficult SSS design problem, and to aid the Subcontractor in complying with NFPA, the Subcontractor shall delete the four, stand sidewall sprinklers, in room #112. In their place the Subcontractor shall install one Victaulic Model V2709 standard horizontal sidewall sprinkler for each overhead door, (door #15 and #17). The sprinklers shall be installed in such a manner that the spray pattern will be from the south to the north of each door.</p> <p>The Subcontractor has also supported dry pipe from the overhead rails of overhead doors #1 and #18, in the Decon Bay (room #113). A Victaulic Model V2709 standard horizontal sidewall sprinkler shall be installed in lieu of the current dry pipe configuration, for each door, the same as room #112. The sprinklers shall be installed in such a manner that the spray pattern will be from the west to the east of each door.</p> <p>The Subcontractor has installed a dry pipeline above the Essex Box Tipper. The Box Tipper is interfering with adequate sprinkler coverage. In order to alleviate this problem the Subcontractor shall remove the north sprinkler head above the Box Tipper, and insert an elbow. An appropriate length of pipe shall be installed between the new elbow and a new sprinkler head preceding the north edge of the Box Tipper, to protect the aisle below.</p> <p>The Subcontractor shall perform an in-service test. For all dry pipe modifications apply 40 psi to dry pipe system and soap joints.</p> <p>All dry pipe alterations shall be identified on VDS #91 (As-built drawings).</p> <p>CN 305R1 takes precedence over and deletes CN 305.</p>
306	<p>Reference INEEL Drawing 520035 (A-1).</p> <p>Reference INEEL Drawing 520041 (A-7).</p> <p>The Subcontractor has modified the north end of B-line, between 4 and 5 lines. The following changes were made:</p> <ol style="list-style-type: none"> <li>1. The Subcontractor has installed an additional personnel door on the north end of B-line to accommodate Box Tipper access to the hydraulic bank and air scavenger duct. The new personnel door shall be identified as door #16, and indicated as such on the door schedule.</li> <li>2. The Subcontractor has fabricated an opening in B-line (approximately 10 feet by 8 feet), east of the Box Tipper access door, to accommodate loading of SSS boxes.</li> <li>3. The Subcontractor has fabricated an opening in B-line (approximately 4 feet by 4 feet), between overhead door #17 and the Box Tipper access door, which houses four HEPA frames and filters.</li> </ol> <p>The Contractor has accepted these changes as part of the design submitted by the Subcontractor for the Soil Stabilization System.</p>
307	<p>Reference INEEL Drawing 520061.</p> <p>Reference INEEL Drawing 520066, note 8.</p> <p>CN 268R1</p> <p>Currently, duct heaters (HTR-YDJ-24 and 25) located within the 18 and 20-inch ducting are NEMA 1 rated. The current requirement for SSS electrical equipment in CPP-1688 room 112 is NEMA 12, per CN 268R1. Current requirements for all other electrical components in CPP-1688 rooms 112 and 113 are NEMA 3r, per the referenced drawing, note 8.</p> <p>Normal ICDF operation procedures call for water use to be kept well below (HTR-YDJ-24 and 25). Therefore, NEMA 1 rated heaters (HTR-YDJ-24 and 25) are acceptable.</p>
308	<p>Reference SPC-1485 Section 02722 page 8, lines 8–10.</p> <p>Per Section 02722, the sanitary sewer system requires all piping systems to be cleaned as specified in Section 02713 (potable and raw water systems). The Subcontractor shall not cleanse the sanitary sewer system per directions established for the potable and raw water systems. The Subcontractor shall delete lines 8–10 of Section 02722 page 8 of SPC-1485.</p> <p>Note: The Subcontractor must still verify that the sanitary sewer system is operable and flow is being distributed into the previously existing manhole (MAH-SAB-WQ-418), located inside INTEC. Reference INEEL Drawing 520019 (U-11) for manhole location.</p>

CN #	
309	<p>Reference AHJ-27-03.</p> <p>Reference CN 283 as-built drawing, modified from INEEL drawing 520069 (E-8).</p> <p>Panel 300 (PCC-YDJ-300) has a capacity of 450KW. Currently PCC-YDJ-300 has loads totaling 302KW. MCC-YDJ-508 has a total load of 260KW. CN 309 shall serve as an administrative procedure allowing MCC-YDJ-508 to be energized.</p> <p>Prior to MCC-YDJ-508 being energized, HTR-YDJ- 1,2,3,4,5,6 and HTR-YDJ-21 and 22 shall be locked out using the Subcontractor’s LO/TO process currently in use. This will reduce the actual load on panel 300 to 151KW. MCC-YDJ-508 shall then be energized (260KW) which will raise PCC-YDJ-300 to a load of 411KW.</p> <p>When not required, MCC-YDJ-508 shall be locked out and HTR-YDJ-1,2,3,4,5,6,21 and 22 shall be re-energized. (See the referenced AHJ.)</p>
309 Att.	<b>AUTHORITY HAVING JURISDICTION (AHJ) RECORD</b>
310	<p>Reference VDS-158 Structural Steel and Miscellaneous Metals Inspections and Testing Records.</p> <p>Reference SPC-1485 Section 5100, pages 1 and 2.</p> <p>SPC-1485 Section 5100 does not require test and inspection reports to be submitted by the Subcontractor. VDS Item 158 is hereby deleted.</p>
310R1	<p>Reference VDS-158 Structural Steel and Miscellaneous Metals Inspections and Testing Records.</p> <p>Reference SPC-1485 Section 5100 pages 1 and 2.</p> <p>Reference VDS-262 Software and Programmable Logic</p> <p>SPC-1485 Section 5100 does not require test and inspection reports to be submitted by the Subcontractor. VDS item 158 is hereby deleted.</p> <p>SPC-1481 does not require the Subcontractor to submit software for PLC-YDJ-964 (Easy Blend Batching System). VDS item 262 is hereby deleted.</p> <p>CN 310R1 takes precedence over and deletes CN 310.</p>
311	<p>Reference SPC-1485 Section 16195, Electrical Identification.</p> <p>Reference INEEL drawing (as-built in progress as of 10/21/03 per CN 283) modified from INEEL Drawing 520069.</p> <p>Disconnects controlling heaters HTR-YDJ-8 and 9 located in CPP-1688 room 112, are physically located in such a way as to violate NEC ARTICLE 110.26 (A) Working Space. The workspace access requirements apply to working on energized equipment. The only time disconnects are required to be open, are to change out fuses. The switches are installed in accordance with NEC Article 404.8 Exception 2 and are accessible by portable means. Therefore the disconnects shall be de-energized prior to opening.</p> <p>All referenced disconnect caution labels will be provided to the Subcontractor GFE. All referenced phenolic labels shall have white lettering with a red background. Label height shall be at a minimum 1-inch. Lettering height (first line) shall be 3/8-inch. Lettering height (second line) shall be 1/4 inch.</p> <p>The Subcontractor shall place a phenolic label on the face of each of the above referenced disconnects in CPP-1688 room 112 (Treatment room), worded as such:</p> <p>CAUTION</p> <p>POWER IS SUPPLIED FROM</p> <p>PANEL PCC-YDJ-300, CKT 7,9,11</p> <p>DE-ENERGIZE CKT 7,9,11 PRIOR TO OPENING</p>
312	<p>Reference SPC-1485 Section 13505 page 3 of 8 lines 1–3.</p> <p>Reference CN 83.</p> <p>CN 83 deleted the requirement for electrical supervision for the project’s PIVs, except for valve FWV-UTI-7105 located south of CPP-1688. Currently FWV-UTI-7105 has conduit, wiring, tamper switch and a J-box installed.</p> <p>The Subcontractor shall delete the electrical supervision for valve FWV-UTI-7105. The conduit, wiring, tamper switch, and J-Box shall be left in place and labeled "Spare". Wires in the conduit shall be marked "Spare" on both ends of each wire.</p> <p>Follow labeling requirements set forth in SPC-1485.</p>
313	<p>Reference INEEL Drawing 520071 (E-10) view D.</p> <p>Reference INEEL Drawing 520066 (E-5).</p> <p>1. Head bolt heater racks have been installed without the cord clips as specified in INEEL Drwg 520071. The cords are currently coiled and hung between the J-box and capped pipe, resting on unistrut. The Subcontractor shall not install the clips.</p> <p>2. The fire alarm pull stations installed in the decon bay room 113 and the treatment room 112 are Fire-Lite Model BG-12 devices. This model is not rated for damp environments. The decon bay and the treatment room are designated as damp environments on INEEL Dwg 520066 (E-5) Note 8. The Subcontractor shall replace Fire-Lite Model BG-12 pull stations in the Decon Bay and the Treatment Room with Model BG-12LOB pull stations, which are listed for outdoor use.</p>

CN #	
314	<p>Reference SPC-1485, Section 15401 page 5 of 8 lines 11–15.</p> <p>Reference CN 208 issued 06.25.03.</p> <p>CN 208 modified the referenced specification and changed the raw water Backflow Preventer from the Watts 709-QT to the Watts 007M1QT and also changed the potable water Backflow Preventer from the Watts 909-PR to the Watts 909M1QT. The Backflow Preventer models were changed in order to accept 2-inch pipe. However, the Backflow Preventer model numbers were inadvertently interchanged per CN 208.</p> <p>The Subcontractor shall install the potable water Backflow Preventer model Watts 007M1QT, which is a 2-inch double check valve Backflow Preventer. The Subcontractor shall remove the existing Backflow Preventer currently installed in the raw water line. The Subcontractor shall procure and install the Watts 909M1QT for the raw water line, which is a double check valve device with additional vacuum breaker capability.</p>
315	<p>Reference NFPA 72.</p> <p>References are listed in each bullet below.</p> <p>The referenced specification, Section 16721 page 6 lines 22 thru 28, shall be replaced with the following:</p> <p><u>Wiring Styles:</u></p> <p>Initiating devices shall be wired so they are supervised by a direct current supervised system (see NFPA 72 Chapter 6. Fire alarms shall be wired Class "B", Style "B" two-wire (see NFPA 72 Table 6.5). If the system is addressable, the circuits shall be installed as Class "B", Style "4" circuits.</p> <p>Notification appliance circuits shall be installed as Class B, Style Y.</p> <p>Supervisory signal circuits shall be wired Class B, Style "4" two-wire (see NFPA 72 Table 6.6.1).</p> <p>The referenced specification, Section 16721 page 4 of 9 lines 8 and 9, which states that the initiation and notification circuits shall not share the same conduit. The Subcontractor is hereby allowed to place initiating and notification signal circuits in the same conduit.</p> <p>The referenced specification, Section 16500 page 4 of 5 lines 22 and 23 state that the exit signs will be green with opaque white letters. The Subcontractor shall install the signs indicated on INEEL Drawing 520068 (E-7), which are red (Lithonia catalog number LV P W1 R 277 ELN DL).</p> <p>The referenced specification, Section 16721 page 5 of 9 line 25, references NFPA 72 Chapter 4. The Subcontractor shall change the text "Chapter 4", to Chapter 7.</p> <p>The referenced specification, Section 16721 page 5 of 9 lines 38 and 39, states "Manual fire alarm pull boxes shall be mounted at 42-inches above finished floor unless specified otherwise." INEEL Drawing 520096 (LSS-3) note 3 requires installation of the devices to be 40-inches above finished floor. The Subcontractor shall install the fire alarm pull boxes at 42-inches above finished floor.</p> <p>The referenced specification, Section 16721 page 9, references NFPA 72 Chapter 7 in several instances regarding testing and acceptance requirements. All references to NFPA 72 Chapter 7, referenced on page 9 shall be changed to NFPA Chapter 10.</p> <p>The referenced specification, Section 16721 page 8 lines 36 and 37, shall be replaced with the following:</p> <p><u>Acceptance Test Procedure:</u></p> <p>The acceptance test procedure shall comply with NFPA 72 Chapter 10 Table 10.4.3 Inspection and Testing Form. The Subcontractor shall conduct the acceptance using an approved acceptance test procedure document.</p> <p>The referenced specification, Section 16721 page 4 of 9 lines 34 and 35, state that the JA boxes shall be expandable up to 6 circuits and installed in a NEMA 1 enclosure. The Subcontractor shall provide and install a NEMA 4 JA box in lieu of the previously specified NEMA 1 JA box.</p> <p>The referenced specification, section 16721 page 5 of 9 lines 41 thru 43 states that "Installing conduits or any other penetration is <u>prohibited</u> in the top of any fire alarm control panel, terminal box or surge suppresser box". The referenced specification shall be changed to eliminate the expandability to 6 circuits. The referenced specification shall be modified to read, "Installing conduit or other penetrations in the top of any fire alarm control panel, terminal box, or surge suppresser box is allowed if the penetration is sealed."</p> <p>The referenced specification, Section 16721 page 5 of 9 line 25, shall be changed to reference chapter 7, in lieu of chapter 4.</p> <p>INEEL Drawing 520095 (LSS-2) Note 3 and 520096 (LSS-3) Note 2 state "Audible/Visible Device 96 above finished floor." Due to chapter 4 being changed to chapter 7, this statement is no longer correct. However the Subcontractor is allowed to install audible/visual devices at 96-inches above finished floor.</p> <p>The referenced specification, Section 16721, page 5 of 9 line 35, states that fire alarm control panels and terminal boxes shall be mounted 6 feet above finished floor. The Subcontractor is hereby allowed to install the above devices at approximately 6 feet above finished floor.</p>
315R1	<p>Reference NFPA 72.</p> <p>References are listed in each bullet below.</p> <p>The final two paragraph reflects the revision.</p>

CN #	
315R1 (cont.)	<p>The referenced specification Section 16721 page 6 lines 22 thru 28 shall be replaced with the following:</p> <p><u>Wiring Styles:</u></p> <p>Initiating devices shall be wired so they are supervised by a direct current supervised system (see NFPA 72 Chapter 6. Fire alarms shall be wired Class "B", Style "B" two-wire (see NFPA 72 Table 6.5). If the system is addressable, the circuits shall be installed as Class "B", Style "4" circuits.</p> <p>Notification appliance circuits shall be installed as Class B, Style Y.</p> <p>Supervisory signal cirucits shall be wired class B, Style "4" two-wire (see NFPA 72 Table 6.6.1).</p> <p>The referenced specification, Section 16721 page 4 of 9 lines 8 and 9, which states that the initiation and notification circuits shall not share the same conduit. The Subcontractor is hereby allowed to place initiating and notification signal circuits in the same conduit.</p> <p>The referenced specification, Section 16500 page 4 of 5 lines 22 and 23 state that the exit signs will be green with opaque white letters. The Subcontractor shall install the signs indicated on INEEL Drawing 520068 (E-7), which are red (Lithonia catalog number LV P W1 R 277 ELN DL).</p> <p>The referenced specification, Section 16721 page 5 of 9 line 25 references NFPA 72 Chapter 4. The Subcontractor shall change the text "Chapter 4", to Chapter 7.</p> <p>The referenced specification, Section 16721 page 5 of 9 lines 38 and 39 states "Manual fire alarm pull boxes shall be mounted at 42 inches above finished floor unless specified otherwise." INEEL Drawing 520096 (LSS-3) note 3 requires installation of the devices to be 40 inches above finished floor. The Subcontractor shall install the fire alarm pull boxes at 42 inches above finished floor.</p> <p>The referenced specification, Section 16721 page 9 references NFPA 72 Chapter 7 in several instances regarding testing and acceptance requirements. All references to NFPA 72 Chapter 7, referenced on page 9, shall be changed to NFPA Chapter 10.</p> <p>The referenced specification, Section 16721 page 8 lines 36 and 37, shall be replaced with the following:</p> <p><u>Acceptance Test Procedure:</u></p> <p>The acceptance test procedure shall comply with NFPA 72 Chapter 10 Table 10.4.3 Inspection and Testing Form. The Subcontractor shall conduct the acceptance using an approved acceptance test procedure document.</p> <p>The referenced specification, Section 16721 page 4 of 9 lines 34 and 35 state that the JA boxes shall be expandable up to 6 circuits and installed in a NEMA 1 enclosure. The Subcontractor shall provide and install a NEMA 4 JA box in lieu of the previously specified NEMA 1 JA box.</p> <p>The referenced specification, Section 16721 page 5 of 9 lines 41 thru 43, states that "Installing conduits or any other penetration is <u>prohibited</u> in the top of any fire alarm control panel, terminal box or surge suppresser box." The referenced specification shall be changed to eliminate the expandability to 6 circuits. The referenced specification shall be modified to read, "Installing conduit or other penetrations in the top of any fire alarm control panel, terminal box, or surge suppresser box is allowed if the penetration is sealed."</p> <p>The referenced specification, Section 16721 page 5 of 9 line 25 shall be changed to reference chapter 7, in lieu of chapter 4.</p> <p>INEEL Drawing 520095 (LSS-2) Note 3 and 520096 (LSS-3) Note 2 state "Audible/Visible Device 96 above finished floor." Due to chapter 4 being changed to chapter 7, this statement is no longer correct. However the Subcontractor is allowed to install audible/visual devices at 96-inches above finished floor.</p> <p>The referenced specification, Section 16721, page 5 of 9 line 35 states that fire alarm control panels and terminal boxes shall be mounted 6 feet above finished floor. The Subcontractor is hereby allowed to install the above devices at approximately 6 feet above finished floor.</p> <p>The referenced specification, Section 16721, page 5 of 9 lines 29–33 shall be changed to allow for the use of heat-shrink tubing or tape, which will provide insulation for the shield wire. The shield wire shall be cut back to the cable jacket.</p> <p>The referenced specification, Section 16721, page 4 of 9 lines 39 and 40 state "Furnish and install minimum 6 AWG ground wire from transient eliminators to building ground system." The Subcontractor is allowed to install 12 AWG or smaller ground wire, in lieu of a minimum 6 AWG.</p> <p>CN 315R1 takes precedence over and hereby deletes CN 315 in its entirety.</p>
316	<p>Reference SPC-1485, Section 16160 page 4 (FIELD QUALITY CONTROL).</p> <p>The referenced specification requires the Subcontractor to verify phase balance at each panelboard branch circuit, and rearrange circuits in the panelboard if necessary to meet specified criteria.</p> <p>The Subcontractor is allowed to verify amperage and phase balance by measuring and recording readings on the load side of the breakers in PCC-B21-49, at the point where the cables feed through MAH-YDJ-EE-494. The Subcontractor shall use required PPE for the measurement and be aware that the manhole is a confined space. Taking measurements in this location avoids exposure to energized parts.</p>
317	<p>Reference SPC-1481.</p> <p>Referecne SFP-319.</p> <p>SPC-1481 does not specify labeling requirements for equipment and assoicated wiring described in SPC-1481.</p> <p>Attached is a list of labels for the SSS equipment and circuits. The Subcontractor shall procure and install labels for each section of SSS equipment identified on the attached list. Labels are to be made from materials that are compatible with the application.</p>

CN #																																																													
317 (cont.)	<p><u>Equipment Label Content:</u> Include the following, as applicable, on electrical power-distribution equipment labels:</p> <p>Properly assigned identifier (as shown on drawings)</p> <p>Noun name or function description</p> <p>Designation on system designator as assigned by INTEC</p> <p>Equipment inventory number</p> <p>Voltage and the number of phases</p> <p>Power source (fed from) equipment identifier</p> <p>Circuit number (if applicable)</p> <p>Transformer and disconnect switch labels shall contain the destination (fed to) power equipment identifier fed by the transformer secondary or disconnect switch</p> <p><u>Equipment Label Colors:</u> Background and legend colors for electrical equipment labels shall be as specified in Table I below.</p> <p>Table I. Electrical Equipment Label Colors.</p> <table><tr><th>Power System Classification</th><th>Power System Designator</th><th>Background Color</th><th>Legend Color</th></tr><tr><td>Normal</td><td>N</td><td>black</td><td>white</td></tr><tr><td>Standby</td><td>S</td><td>yellow</td><td>black</td></tr><tr><td>Emergency</td><td>E</td><td>white</td><td>red</td></tr><tr><td>UPS</td><td>U</td><td>white</td><td>red</td></tr><tr><td>Regulated</td><td>R</td><td>same as source</td><td>same as source</td></tr><tr><td>Direct current</td><td>DC</td><td>black</td><td>white</td></tr></table> <p><u>Equipment Label and Lettering Size:</u> Electrical equipment label and lettering size shall be as specified in Table II. If equipment size constraints make the specified label size impractical, the label and lettering size will be as large as possible for that particular equipment application.</p> <p>Table II. Electrical Equipment Label Sizes.</p> <table><tr><th>Power Equipment Classification</th><th>Label Height (Minimum)</th><th>Lettering Height First Line</th><th>Lettering Height Subsequent Lines</th></tr><tr><td>Primary Distribution Equipment</td><td>2 1/2 inch</td><td>3/4 inch</td><td>3/8 inch</td></tr><tr><td>Secondary Power Distribution Switches</td><td>1 inch</td><td>3/8 inch</td><td>1/4 inch</td></tr><tr><td>Disconnect Switches</td><td>1 inch</td><td>3/8 inch</td><td>1/4 inch</td></tr><tr><td>Power Distribution Panels</td><td>1 inch</td><td>1/2 inch</td><td>1/4 inch</td></tr><tr><td>Power Distribution Transformers</td><td>2 inch</td><td>1/2 inch</td><td>1/4 inch</td></tr><tr><td>PCC/MCC Switchgear Switchboards</td><td>2 inch</td><td>3/4 inch</td><td>3/8 inch</td></tr><tr><td>Power Receptacles</td><td>3/8 inch</td><td>3/16 inch</td><td>N/A</td></tr></table>	Power System Classification	Power System Designator	Background Color	Legend Color	Normal	N	black	white	Standby	S	yellow	black	Emergency	E	white	red	UPS	U	white	red	Regulated	R	same as source	same as source	Direct current	DC	black	white	Power Equipment Classification	Label Height (Minimum)	Lettering Height First Line	Lettering Height Subsequent Lines	Primary Distribution Equipment	2 1/2 inch	3/4 inch	3/8 inch	Secondary Power Distribution Switches	1 inch	3/8 inch	1/4 inch	Disconnect Switches	1 inch	3/8 inch	1/4 inch	Power Distribution Panels	1 inch	1/2 inch	1/4 inch	Power Distribution Transformers	2 inch	1/2 inch	1/4 inch	PCC/MCC Switchgear Switchboards	2 inch	3/4 inch	3/8 inch	Power Receptacles	3/8 inch	3/16 inch	N/A
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CN #	
318	<p>Reference SFP 317 clarification.</p> <p>Reference INEEL Drawing 520048 (S-3) for drain layout.</p> <p>The Subcontractor shall install temporary inflatable pipe plugs into the HDPE drains located in CPP-1688 room 112 (treatment room) and CPP-1688 room 113 (decon bay). Plugs shall be positioned and secured in the drains in such a manner as to prevent water and all liquids from entering into the HDPE drain system below.</p> <p>Subcontractor shall take precautions to ensure the pipe plugs do not impede the flow of water beneath them, due to rain and snow melt flowing from the exterior contaminated equipment pad trench and, ultimately, into MAH-YDJ-SW-498 (Decon pump station), where operations will be monitored closely by the Contractor.</p> <p>Water collected in the interior trench and sump shall be pumped into a Contractor supplied poly tank(s). Captured water shall be pumped to a satisfactory level, which shall be determined and approved by the Contractor’s representative. Disposal of the water shall be the responsibility of the Contractor.</p> <p>The Contractor will supply the pipe plugs for the Subcontractor to install. Pipe plugs will remain the property of the Contractor.</p>
319	<p>Reference SPC-1485, Section 15801 page 7 of 7.</p> <p>INEEL Drawing 520058.</p> <p>A balancing report has been received from the Subcontractor which depicts the total flow for fan EF-YDJ-3 to be 108.9% of the design flow and EF-YDJ-4 to be 103.3 % of design flow. Individual flows for each duct location associated with EF-YDJ-4 were not measured due to insufficient straight ducting near the vents. Therefore due to the configuration of the ducting the total flowrates are within the specified range of +10% and -0%, these ventilation systems are hereby accepted.</p> <p>EF-YDJ-1 total flow measured 94% of design flow and EF-YDJ-2 measured 115% of design flow. Individual vent flows on these two duct systems were measured and none fell within design criteria. The design did not allow for the installation of dampers in these systems. Therefore, due to the non-adjustable nature of the systems associated with EF-YDJ-1 and 2, the system is hereby acceptable as it is currently configured.</p> <p>The test equipment cannot be calibrated at the INEEL as required per PRD-5015. Therefore, the Subcontractor shall submit the testing equipment for a post-test calibration at an approved calibration laboratory, and submit results through the vendor data system.</p>
320	<p>Reference SPC-1485, Section 16450 page 2 of 3 lines 34 and 35.</p> <p>Reference INEEL Drawing 520064 (E-3).</p> <p>Reference INEEL Drawing 520053 (P-2).</p> <p>Reference NCR 35860.</p> <p>The above-grade grounding connections to the CPP-1688 structural steel were Cad welded. The referenced specification requires that all grounding above grade be accomplished by either compression type grounding clamps or beam clamps. Based on correspondence issued from a USA Building representative, welding to the structural steel did not degrade building integrity. Therefore the referenced specification shall be modified to allow for the welded connection of the grounding cables.</p> <p>The 2-inch raw water piping ground cable is bolted to a flange brace hole on the metal building column located in the southeast corner of 1-line. The referenced specification shall be modified allowing the raw water piping to be bolted to the referenced column.</p>
321	<p>Reference <b>SC-14 SUPERINTENDENCE BY SUBCONTRACTOR.</b></p> <p>Reference Ovard letter dated March 17, 2004.</p> <p>Due to the level of complexity of work remaining to be completed on contract 9300, the Ovard Safety Officer position may be eliminated at the discretion of the Subcontractor.</p>
322	<p>Reference SPC-1485 Section 16195 page 8, lines 10–13.</p> <p>Reference INEEL Drawings 520062 and 520069.</p> <p>Reference VDS 129 and 279.</p> <p>Power Management System Engineer has indicated that the current labeling within Sub 2 is adequate, and no further labeling is necessary. The Subcontractor is not required to label feeders in the cable trench of Substation 2 Block 21 CPP-620.</p> <p>Currently INEEL Drawing 520062 and 520069 do not accurately reflect one another. Attached is an as-built of Drawing 520062. Subcontractor shall redline INEEL Drawing 520069 to reflect INEEL Drawing 520062.</p> <p>The project is near completion. The Subcontractor and BBWI are currently at an impasse regarding the CPM Schedule. Therefore, the vendor data requirement for submittal of a CPM Schedule (VDS-129) is hereby deleted from Subcontract 9300. The Subcontractor shall submit a cover sheet for VDS-129 referencing CN 322, through the vendor data system.</p> <p><b>NOTE:</b> CN 322 does not approve the Subcontractor’s CPM Schedule formally submitted.</p> <p>VDS-279 (SSSTF Equipment Supplier Subcontract) submittal requirement is hereby deleted. The Subcontractor shall submit a cover sheet for VDS-279 referencing CN 322, through the vendor data system.</p>
323	<p>Reference SPC-1485 Section 16500 pages 2 and 3 of 5.</p> <p>The referenced specification requires "Manufacturer's standard form" for warranties on the emergency lighting unit batteries and the fluorescent ballasts. The referenced specification also requires warranty durations which are not the standard manufacturer's warranty.</p> <p>The referenced specification shall be modified to allow acceptance of the manufacturer's standard warranty. The Subcontractor shall resubmit VDS-113 / VDR-77064 referencing CN 323.</p>

**Appendix B**

**Project Nonconformance Reports**

**(See CD-ROM in back cover.)**





**Appendix C**

**Prefinal Inspection**

**(See CD-ROM in back cover.)**



## **Appendix D**

### **ICDF Tank Certification Assessment and Chemical Compatibility Results**

**(See CD-ROM in back cover.)**



## **Appendix E**

### **Table of Proposed Changes to the *ICDF Complex Operations and Maintenance Plan***



## Appendix E

### Table of Proposed Changes to the *ICDF Complex Operations and Maintenance Plan*

Page, Section	Change To Be Made
Global	Correct all references to the Landfill or Evaporation Pond WACs to refer to the new combined Complex WAC.
xiv, Acronyms	Revise acronyms, delete ECF and replace with FCF, replace INEEL with Idaho on ICDF, change INEEL to INL.
Page 1-1, third sentence	“is being” to “was”
Page 1-3, Figure 1-2	Revise figure to reflect current configuration.
Page 3-4, Section 3.1.3, first full paragraph	Add the following just before the last sentence in the paragraph: Other CERCLA-generated liquid wastes may be disposed in the ICDF Evaporation Pond subject to meeting the WAC.
Page 3-4, first full paragraph, last sentence	Replace the text “ <b>Appendix B</b> ” of the evaporation pond WAC document (DOE-ID 2002c) with “ <b>EDF-ER 274.</b> ”
Page 3-4, first two bullets, midway down the page	<p>Delete:</p> <ul style="list-style-type: none"> <li>• Aqueous wastes generated from groundwater monitoring activities other than WAG 3 or ICDF Complex groundwater monitoring activities are prohibited from disposal in the ICDF evaporation pond.</li> <li>• Other aqueous waste streams not associated with operation of the ICDF Complex are prohibited from disposal in the ICDF evaporation pond.</li> </ul>
Page 3-38, Section 3.10.3	Replace the “Waste Profile and Verification Sampling Guide” with the <i>ICDF Complex Waste Profile and Verification Sample Guidance</i> , Ref. DOE/NE-ID-11175.
Page 4-4, Section 4.1.6.1, third and fourth sentences	Remove: Once the ICDF Complex becomes operational, a portion of the SSA will be operated as a 40 CFR 264.554 unit to provide staging for incoming solid waste (e.g., soil, debris) awaiting treatment and subsequent disposal in the landfill. Another portion of the SSA will be operated as a 40 CFR 262.34 unit providing storage for incoming and ICDF Complex-generated liquid waste awaiting disposal at the evaporation pond.



Page, Section	Change To Be Made
Page 4-6, Section 4.1.10, first sentence	Add to the first sentence after the document reference, pending turnover to the ICP contractor: Records will be periodically turned over to the ICP contractor for input into the contractor's document management system. This will relieve the ICDF operating contractor of the need for extensive records storage facilities.
Page 4-6, Section 4.2	Insert the following text after the third sentence: Alternatively, when the shipment will not traverse public roads, the bed of the truck or container may be sealed to prevent contamination spread during shipment and the truck/container decontaminated after completion of the remediation.
Page 4-7, Section 4.3.1, reword the sentence at the top of the page	Insert: Depending on the amount and type of characterization data provided by the generator, verification samples may be taken at the dig site per the <i>ICDF Complex Waste Profile and Verification Sample Guidance</i> (DOE/NE-ID 11175). Delete: At the dig site, a specific number of verification samples will be collected.
Section 4.3.2, first paragraph, fourth sentence	Delete: Portland cement-based mixture from the fourth sentence. And insert: treatment recipe based on treatability studies. Delete: Portland cement will be the primary binding agent used for stabilizing the waste. Admixtures, including flyash, blast furnace slag, and sodium sulfide, may also be used in a chemical fixation and stabilization (CFS) formulation. Last sentence, delete "cement based."
Section 4.3.2, second paragraph, second sentence	Delete rollon/rolloff, and replace with "catch."
Section 4.3.2, first bullet after the second paragraph, which starts with "Vertical Lift Tipper"	Delete "2 × 4 × 8 and 4 × 4 × 8 plywood" in front of engineered boxes and parenthetically insert (typically 4- × 4- × 8 or 2- × 4- × 8). Delete: The boxes will be loaded into the tipper with the 8-ft dimension being located inward toward the tipper. Delete: "that clamps down onto the top of the box, securing it to the tipper." Reword the sentence "The tipper will raise the box, invert it approximately 180° to dump the soil into the mixer. Successive dumping operations may be required to release most of the soil depending on soil type and moisture content. And delete "and position it onto the top of mixer unit. The box will remain on the mixer during treatment to function as a cover. Light vibration or agitation may be applied to the box to ensure the waste passes the screen mesh."

Page, Section	Change To Be Made
Page 4-7 , Section 4.3.2, second bullet	Reword as follows: Mixer unit (e.g., Besser Mixing Technology MSO 3700 Twin-Shaft Gemini)—Once the soil is loaded into the mixer, an operator adds the treatment reagents based on the weight of the soil and the specific treatment recipe. The treatment recipe will vary depending on the contaminants being treated and the soil types. Reagents may be added by hand through ports in the mixer, pumped in through ports in the top of the mixer or added using the bulk bag unloader. Mixing and reaction times are determined by the treatment recipe. The mixer is a very efficient twin-shaft, counter-rotating mixer that can achieve homogeneous mixtures in only a few minutes. The efficiency of the mixer ensures that the entire volume of soil is exposed to the treatment chemicals to achieve effective treatment.
Page 4-7, second paragraph, third bullet	Reword as follows: Catch container—After the treatment is completed, the batch is discharged into a catch container through a bottom-mounted discharge gate. The discharge gate is then closed, and the catch container is removed and replaced with another empty catch container in preparation for the next batch.
Page 4-9, third paragraph	Delete: Each roll-on/roll-off of treated soil will be sampled for verification. And insert: Treated soil will be sampled per the Sampling Analysis Plan for SSSTF Waste Stabilization Operations (DOE/ID-10924) to ensure the ...
Page 4-11, third bullet	Add: inside a contamination control tent in the decon bay. The grout mixer/pump will be positioned nearby. Remove: adjacent to the hopper/pump assembly. Insert: The box lid will be removed. Delete: Two holes will be cut into each end on the top of the box. The operator will ensure that the holes breach the plastic liner on the inside of the box.
Fifth bullet	Delete: one of the holes in the box and liner. And insert: the debris.
Page 4-11, Section 4.3.7, first paragraph	Delete: Only wastes generated by WAG 3 will be accepted for direct disposal into the evaporation pond.
Page 4-12, Section 4.3.8, first bullet	Replace: at the beginning of, with throughout.
Page 4.14, Section 4.4.1 global	Replace the ICDF Complex Waste Verification Sampling and Analysis Plan with ICDF Complex Waste Profile and Verification Sample Guidance.

Page, Section	Change To Be Made
Page 4-14, Section 4.4.1, second sentence	Change as follows: The purpose of this guidance is to provide the assurance that the Material Profile accurately reflects the contents of the waste stream and that key parameters in the waste do not exceed the limits of the Material Profile. Key parameters have been identified as those parameters that impact ICDF operations or limit acceptance of waste in the landfill, as defined by landfill WAC and/or operational limits.
Page 4-15, Section 4.6, second sentence	Revise as follows: Liquid waste will be discharged into the evaporation ponds through two methods: (a) tank/truck...
Page 4-16, Section 4.6.2, first paragraph after bullets, second sentence	Revise as follows: Two “grinder” wastewater pumps are located in the pump station sump. Pumps are controlled by a float system located in the sump.
Page 4-18, Section 4.7, second paragraph	Revise as follows: The ICDF Complex is comprised of four “buildings” from the control and data acquisition viewpoint: the ICDF evaporation pond crest pad, landfill crest pad, decon building, and admin trailer.
Page 4-19, Section 4.8.1, first sentence	Delete: evaporation pond.
Page 4-19, Section 4.9.1, third sentence	Revise as follows: The haul road will be maintained with a width and slope appropriate to the operations being conducted to allow safe access to and operation within the landfill.
Page 4-20, Section 4.9.1, second paragraph, second sentence	Revise as follows: The peninsula will be sized and configured as necessary to accommodate the ongoing facility operations, taking into account waste types and weather conditions.
Page 4-20, Section 4.9.3, fourth bullet, fifth sentence	Revise as follows: Field operations personnel will ensure that water is not over-applied to prevent ponding of water in the landfill and to minimize generation of leachate.
Page 4-21, Section 4.9.5.1, first bullet	Revise as follows: Packaging requirements for bulk-waste soils require either a lined container to facilitate a clean off-loading at the dump face or a sealed-bed dump truck to preclude spread of contamination during transport. Upon arrival at the facility, the container/truck is surveyed by RadCon and the tarp is rolled back to allow easy off-loading. At the dump face, the containers/trucks are off-loaded by raising the container/bed and allowing the soil to slide out.

Page, Section	Change To Be Made
Page 4-22, Section 4.9.5.1, second bullet	Revise: To facilitate landfill operations, a compacted base of a given waste stream may be established at the dump face as described above. Once that base is established, future loads of the same waste stream may be dumped onto the compacted base (to facilitate ramp construction), moved over the compacted base to the desired placement location (possibly greater than 100 ft from the dump face), then spread in 12-in. loose lifts and compacted within the 4-grid limit.
Page 4-22, fifth bullet	Revise: When placed into the landfill, the containers will be located on waste at least 5 ft above the top of the original operations layer, at least 2 ft below the bottom of the final cap elevation, and spaced as specified in EDF-ER-286.
Page 4-22, seventh bullet under Containerized Soil	Add: Containers may be filled with grout after placement to meet the void space and compaction requirements.
Page 4-22, first bullet under Steel Drums and Containers	Steel containers or drums will be located on waste at least 5 ft above the top of the original operations layer, at least 2 ft below the final cap elevation, and spaced as specified.  The steel containers and drums are required by the WAC to be full and will be covered by waste soils and the soils compacted. Containers may be filled with grout after placement to meet the void space and compaction requirements.
Second bullet under Debris	Debris will be located on waste at least 5 ft above the top of the original operations layer, at least 2 ft below the final cap elevation and spaced as specified in EDF-ER-286.
Page 4-23; add new bullet	Alternatively, the ACM may be placed in containers and disposed as containerized waste as noted above. The containers will be placed in an area designated for ACM with the location noted on the placement map. When grouting ACM containers, special care shall be taken to ensure control of the asbestos.
Page 4-23, 4.9.5.2	Revise text to reflect change in PCB criteria allowing debris to be >500 ppm, but maintaining soils at <500 ppm.
Page 4.27, Section 4.11.2, first paragraph	Revise as follows: Visitors to the ICDF Complex are required to be on official business. Visitor access to the ICDF Complex will be through the administration area. Visitors are required to sign the visitor log (Form 473.01, Visitor Traffic Log) at the ICDF Admin trailer. Visitors will be briefed on the ICDF Complex health and safety issues prior to leaving the administration area.
Page 4-28, Section 4.11.2, second paragraph	Delete: and have special approval by INEEL Physical Security.

Page, Section	Change To Be Made
Page 4-28, Section 4.11.2, last paragraph	Change INEEL to ICP.
Page 4-28, Section 4.12.1	Delete evaporation pond from second bullet.
Page 4-29, fourth bullet, second sentence	Delete “at the landfill” replace with “near the southeast corner of the landfill”, add <u>crest pad</u> before <u>buildings</u> , and replace INTEC with ICDF.
Page 4-31, Section 4.12.2, first paragraph	Abnormal facility conditions include earthquakes, wildland fire, extreme weather, spill/leak response, fire within the ICDF Complex, and plant evacuation/take cover. Note that ICDF is under the auspices of the CFA Emergency Communication Center. However, evacuation and take cover alarms from INTEC may be heard at ICDF and shall be acted upon accordingly.
First bullet Second bullet Third bullet Sixth bullet	Change: system to center and INTEC to CFA. Change INTEC to CFA. Add “or through the ECC.” Insert INTEC in front of ECS or the CFA ECC after.
Page 4-30, Section 4.12.3, fourth bullet	Add: Isolate the tank or sump from sources of liquid.
Page 4-30 Section 4.12.5	Delete section: Landfill Storm Water Sump Pumping.  If needed, remove accumulated clean storm water/snow melt from the unlined surface sump in the southwest corner of the landfill. Temporary piping and portable pumping equipment will be used to pump water that is isolated from waste areas from the surface sump to a runoff ditch outside of the landfill. Should sampling of the water in the unlined sump show contamination, the contaminated storm water will be pumped into portable tanks and transferred to the evaporation pond cells. For more information, see Overview 4.12.5 in Appendix A of this document.
Page 4-31, Section 4.13	Add: operational for soil disposal only during that part of the year that weather permits. Debris placement may proceed year-round.
Page 4-33, Operational Compliance Crosswalk ninth and 10 <sup>th</sup> cells under comments	Add: and soils/debris from outside WAG 3.
Page 5-1, Section 5.1, second paragraph	Add to the last sentence in the first paragraph: as well as staging soils requiring treatment pending availability of the treatment. Delete: <u>or at the SSA, a part of the ICDF Complex</u> from the second paragraph second sentence. Revise the last sentence as shown: Profile cross sections of the bulk soil staging area within the ICDF Complex are shown in Figure 5-2.

Page, Section	Change To Be Made
Page 5-3	Delete Figure 5-3.
Page 5-5, Section 5.1.1	First bullet: Delete text “which includes the SSA.”  Second bullet, revise as shown: Two staging areas: full container staging area, bulk soil stockpile staging area; and one storage area, tank and container storage area are established to facilitate ICDF Complex operations.  Third bullet: Revise figure numbers, add bulk soil in front of staging areas, and change are to is.
Section 5.1.2	Delete the first two bullets and text. Revise the first full paragraph as follows: Two staging areas: full container staging area and bulk soil stockpile staging area. There is one storage area; tank and container storage area are established to facilitate ICDF Complex operations.  Delete from the 2 <sup>nd</sup> bullet up from the bottom; delete the physical dimensions of the SSA.
Page 5-6, Section 5.1.3, third bullet	Under consolidation of waste, remove text “or the SSA Storage Area.”
Page 5-8, Section 5.2.3, fourth bullet	Delete: “concrete p-trap” <u>and</u> add: treatment room sump and decon bay trench and
Section 5-3	Delete section.
Page 6-1, Section 6.1.3/Global	Change INEL to ICP and delete the second and third full sentences at the top of the page.
Page 6-2, Section 6.2.1, first paragraph	Revise: Routine maintenance activities for the admin trailer, decon building, and landfill and evaporation pond crest pad buildings will be performed by the operating Subcontractor per the Subcontractor’s maintenance program. These activities include repairs to doors, windows, flooring, plumbing, roofs, and interior walls.
Page 6-4, Section 6.2.6	Revise as shown: Treatment equipment includes a box tipper, mixing unit with discharge capability, stabilization agent feeding apparatus, fugitive dust control equipment including prefilters and a bank of HEPA filters, and a grout mixing/injection unit for debris treatment. Additional equipment may include pallet jacks or other equipment for moving containers.  Preventive maintenance activities include lubrication of bearings and rollers, changing gearbox fluids, and inspection and replacement of filters.
Page 6-4, Section 6.2.9	Delete the last full sentence.

Page, Section	Change To Be Made
Page 6-5, Section 6.4, third sentence	Revise as shown: Procurement, storage, and utilization of spare parts will be in accordance with the operating Subcontractor's maintenance program.
Page 7-1, Section 7.1	Change INEEL to ICP and delete the last full paragraph of the section.
Page 7-2, Section 7.2	Change "facility" to "project" in the first two paragraphs at the top of the page.
Page 7-2, Section 7.3	ICDF uses the INL-integrated Sitewide calibration.
Page 7-3, Section 7.5, first paragraph	Delete existing text and replace with: The operating subcontractor develops Standard Operating Procedures (SOPs) to govern the performance of work at the facility. SOPs are prepared by the subcontractor and reviewed and approved by the ICP Operations Project Manager. Modifications to the SOPs required the same level of review and approval as the original.
Page 7-3, Section 7.6	Delete the last two sentences of the second paragraph under Section 7.6.
Page 8-5, Section 8.6, first bullet, top of the page	Delete SSA from the first sentence.
Page 9-4, Table 9-1	Change leachate collection to leak detection.
Page 10-2, Section 10.3	First sentence, change WAG 3 to ICDF.
Page 10-2, Section 10.3	Third paragraph, change as follows: Records generated by ICDF activities will be transmitted to the authorized records coordinator for inclusion in the Records Management Program. The ICDF PA will coordinate records management activities to ensure ICDF records management practices are consistent and compatible with the ICP records management requirements.
Page 10-2, Table 10-1	Change WAG 3 to ICDF, and ER to ICP records management.
Global through remainder of document	Change WAG 3 to ICDF, and ER to ICP records management. INEEL to INL or ICP as appropriate.
Page 11-7, References	Add to TTN, 2002, EPA's Technology Transfer Network, "Clearinghouse for Inventories and Emission Factors," <a href="http://www.epa.gov/ttnchie1/software/water/WATER9/index.html">http://www.epa.gov/ttnchie1/software/water/WATER9/index.html</a> .